ARITHMETIC WORKSHOP, BOOK 2 · Upton and U.

Dolores Ken

I CAN ADD

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I CAN ADD

CLIFFORD B. UPTON, Teachers College, Columbia University
MARGARET UHLINGER, Arithmetic Specialist, American Book Company

TO THE TEACHER

Purpose. Introductory work in primary number is based upon the everyday activities of children. The first materials of instruction consist of real objects such as apples, coins, beads, and pencils, which the children count, compare, or combine as the situation requires. Through these objective materials basic number meanings and concepts begin to be formed. Real objects, however, cannot be used indefinitely. Materials suitable for this work are not available in large variety. Objects like books are too bulky for easy handling while others like shells may be distracting due to some element of interest other than number. To get a wide variety of interesting materials that can be easily used, it soon becomes necessary to replace real objects with semiconcrete materials such as pictures of animals, apples, and flowers, along with number pictures such as dots or stars arranged in orderly groups. These semiconcrete materials are of the greatest service in the teaching of primary number.

This workbook, *I Can Add*, supplies many challenging activities requiring the use of pictures and other semiconcrete materials through which number meanings and facts are further developed and brought to the abstract stage, thus bridging the gap between concrete and abstract number.

Arithmetic is a sequential subject which means that each step in the teaching of number meanings and facts must be carefully developed before the next one is taken up. *I Can Add* provides for this proper sequence of instruction and assures balanced and adequate practice on each of the essential types of work.

Scope of the Work. In order to satisfy the number needs of young children, most of our best city and state courses of study outline a course of instruction in arithmetic that plans to give the child, by the end of the second grade, the ability to read and write numbers, to count above 100, to make simple measurements, and to use with some facility the basic facts in addition and subtraction with sums and minuends of 10 or less. *I Can Add* covers the topics just mentioned and is suitable for use in the second grade or in any other grade in which these topics are taught.

Vocabulary. In order that children may proceed with the study of number without being handicapped by reading difficulties, the vocabulary of this book has been limited to 298 words, all these words (except a few necessary arithmetical terms) being those with which the children have already become familiar in their primers and first readers. An unusually high percentage of the words used in this book are to be found in authoritative word lists for primary reading.

How to Use This Book. Each teacher may use this book as she thinks best. Many teachers, however, have obtained excellent results by using the book as follows: On pages such as pages 1 to 6, where the reading consists of directions, the children should first read the page silently. The teacher then asks some child to read the page orally to see if it is understood. After the reading the children do the necessary written work. The silent and oral reading may be omitted if the teacher wishes. The vocabulary of this book has been so selected that there should be no reading difficulties in using this book. On pages such as pages 7 to 10, where the addition facts are developed, a child should be asked to read the page orally, and also give orally the numbers that belong in the spaces. After this oral reading, each child should read the page again silently, writing the answers in the spaces as the reading progresses. This procedure may be modified as the teacher thinks best. *Be sure, however, that each child knows exactly what he is to do on each page before starting the written work.*

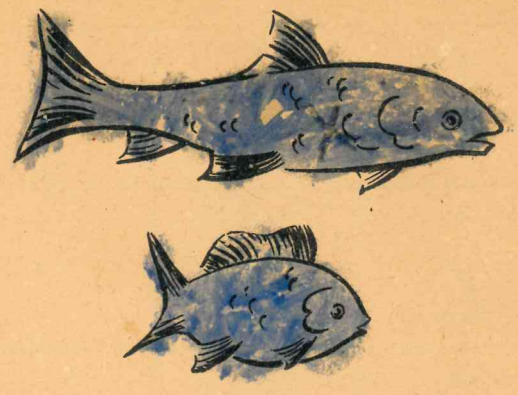
Suggestions relating to the teaching of specific pages of this book are given on pages 126–128. Other suggestions will be found in footnotes on many of the pages of this book.

(Continued on page 126)

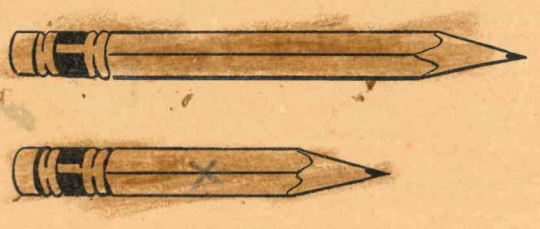
E. P. 1 MADE IN U. S. A.

FIND THE RIGHT ONE

Put X on the large ball.

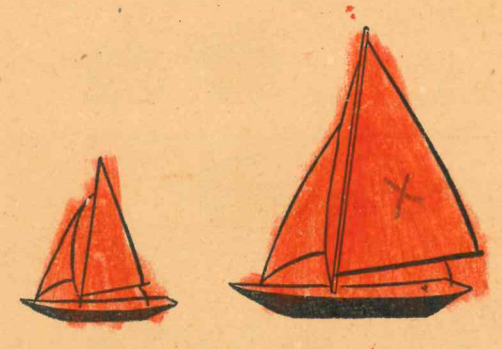


Put X on the long fish.

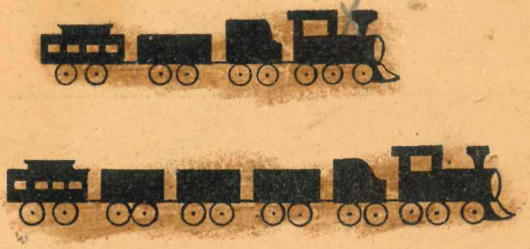


Put X on the short pencil.

Put X on the small cat.



Put X on the large boat.



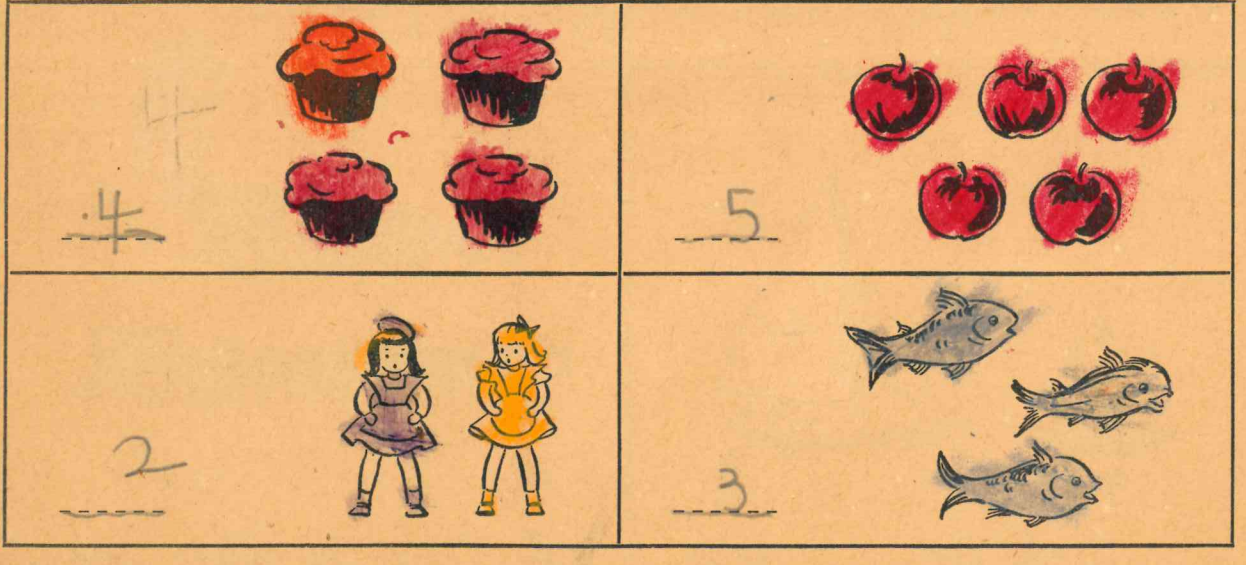
Put X on the short train.

NUMBERS 1 TO 5

Read these numbers 1 to 5. Then write each number:

1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5

Count and write the number:



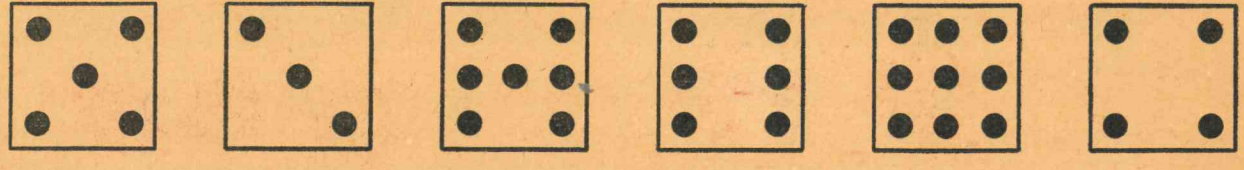
TO THE TEACHER. In writing the numbers 1 to 5, the pupil should first trace the numbers in the second column. In each case, the pupil should begin with the star, trace the dotted part first, and end with the black part. Show at the blackboard how each number is formed. The numbers 4 and 5 require extra help because it is necessary to lift the pencil after finishing the dotted part and before beginning the black part.

NUMBERS 6 TO 10

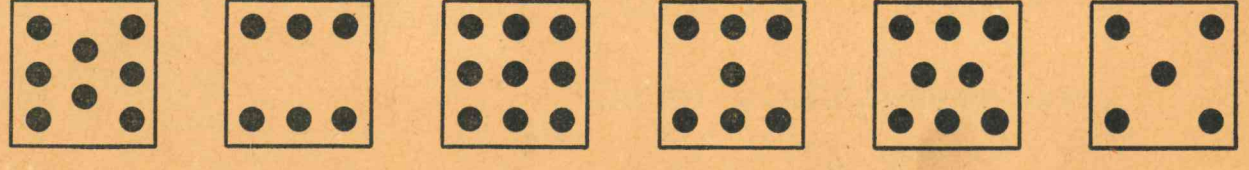
Read these numbers 6 to 10. Then write each number:

6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
10	10	10	10	10	10

Count the dots and write the numbers:



5 3 7 6 9 4

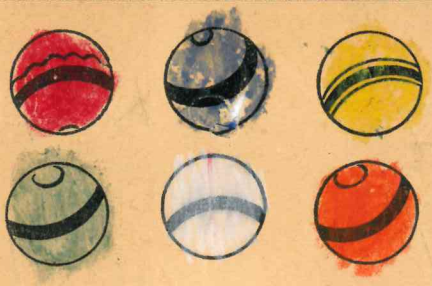


8 6 9 7 8 5

TO THE TEACHER. In writing the number 9, caution the pupil not to lift the pencil from the paper after he completes the loop (the dotted part) and is ready to start the black part. The entire number 9 should be written without lifting the pencil.

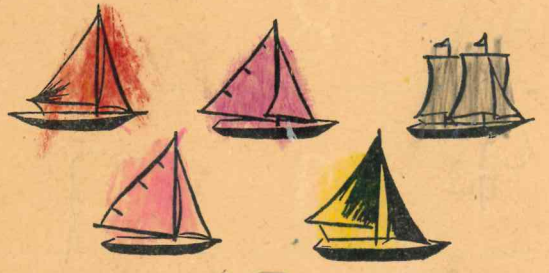
HOW MANY?

Draw a ring around the number that tells how many:

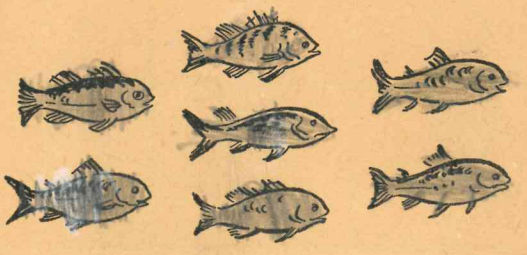


6 7 8

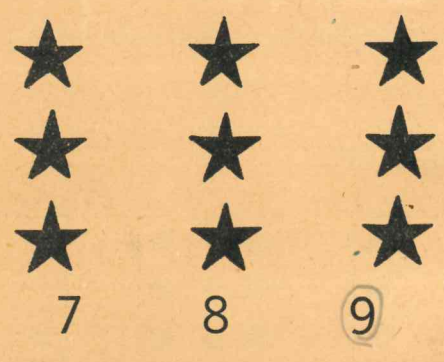
8 9 10



4 5 6



5 6 7



7 8 9

6 7 8

Are 3 birds more than 2 birds? Yes No

Are 7 dogs more than 9 dogs? Yes No

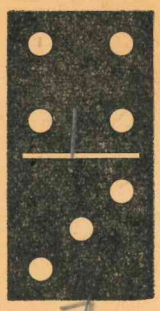
Are 8 balls more than 4 balls? Yes No

Are 2 books more than 5 books? Yes No

TO THE TEACHER. In the exercises at the bottom of the page direct the pupils to answer each question by drawing a line under either *Yes* or *No*.

COUNT THE DOTS

Count the dots and write the numbers:



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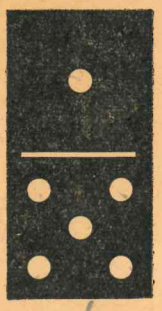

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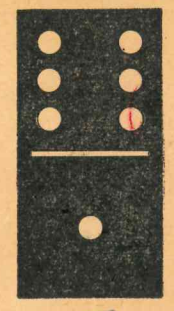
6



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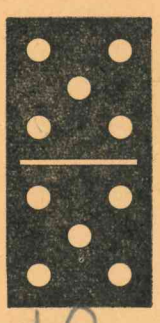

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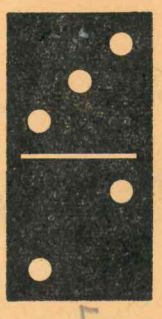

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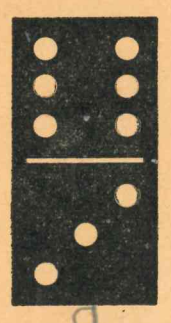

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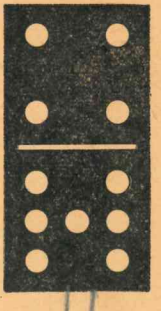

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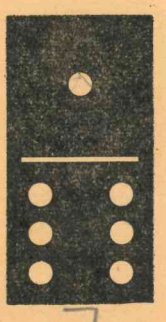

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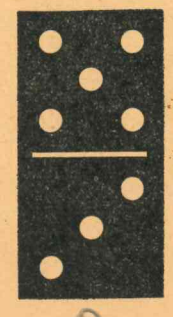

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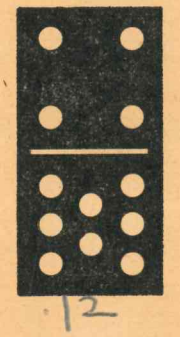

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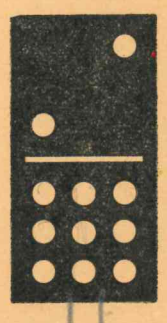

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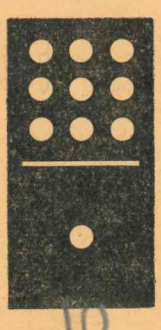

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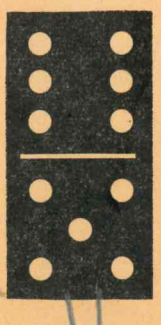

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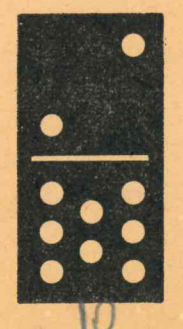

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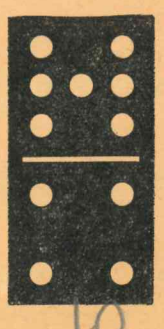


10

TO THE TEACHER. Have the children count the dots on each part of each domino and write the numbers at the side, as shown in the first exercise.

NUMBERS TO 10

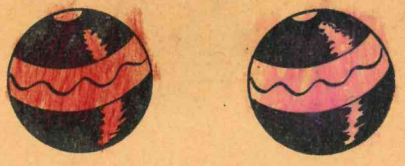
Write the two numbers that come after:			Write the number that comes before:	
7	8	9	3	4
4	5	6	8	9
8	9	10	6	7
1	2	3	2	3
5	6	7	5	6
3	4	5	7	8
6	7	8	4	5
2	3	4	9	10

Draw a line under Yes or No:

Are 7 dolls more than 5 dolls?	Yes	No
Are 4 balls more than 9 balls?	Yes	No
Are 6 cats more than 8 cats?	Yes	No
Are 9 dolls more than 5 dolls?	Yes	No
Are 5 dogs more than 3 dogs?	Yes	No
Are 8 cats more than 10 cats?	Yes	No

TO THE TEACHER. Before the children do the exercises on the upper half of the page, it is important to make sure that they understand exactly what is to be done.

HOW MANY?



I see 2 little balls.

2 balls and 1 ball are 3 balls.

2 and 1 are 3.

I see 1 big ball.

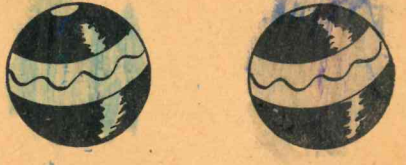
2 and 1 are 3.

$$\begin{array}{r} 2 \\ 1 \\ \hline 3 \end{array} \qquad \begin{array}{r} 2 \\ 1 \\ \hline 3 \end{array}$$

I see 1 big ball.

1 ball and 2 balls are 3 balls.

1 and 2 are 3.



I see 2 little balls.

1 and 2 are 3.

$$\begin{array}{r} 1 \\ 2 \\ \hline 3 \end{array} \qquad \begin{array}{r} 1 \\ 2 \\ \hline 3 \end{array}$$

I see 1 big rabbit.

1 rabbit and 1 rabbit are 2 rabbits.

1 and 1 are 2.

I see 1 little rabbit.

1 and 1 are 2.

$$\begin{array}{r} 1 \\ 1 \\ \hline 2 \end{array} \qquad \begin{array}{r} 1 \\ 1 \\ \hline 2 \end{array}$$

To the Teacher. On this and the following pages first read the page over with the pupils, having them give orally the numbers that go in the spaces. Then have each pupil write the answers in the spaces and also below each addition fact as shown in the first exercise. Also explain that a short way to write "2 and 1 are 3" is like this: $\begin{array}{r} 2 \\ 1 \\ \hline 3 \end{array}$

HOW MANY?

3 balls and 1 ball are 4 balls.

3 and 1 are 4. 3 and 1 are 4.

$$\begin{array}{r} 3 \\ 1 \\ \hline 4 \end{array}$$

1 ball and 3 balls are 4 balls.

1 and 3 are 4. 1 and 3 are 4.

$$\begin{array}{r} 1 \\ 3 \\ \hline 4 \end{array}$$

4 birds and 1 bird are 5 birds.

4 and 1 are 5. 4 and 1 are 5.

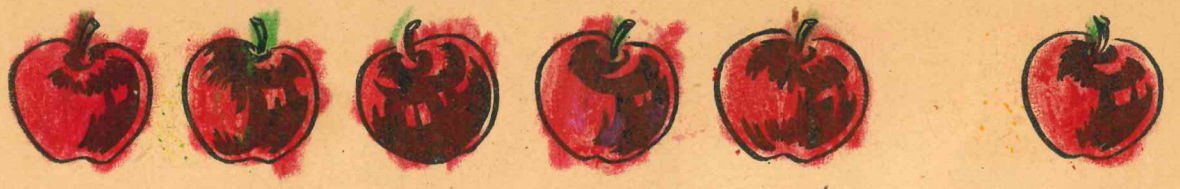
$$\begin{array}{r} 4 \\ 1 \\ \hline 5 \end{array}$$

1 bird and 4 birds are 5 birds.

1 and 4 are 5. 1 and 4 are 5.

$$\begin{array}{r} 1 \\ 4 \\ \hline 5 \end{array}$$

HOW MANY?

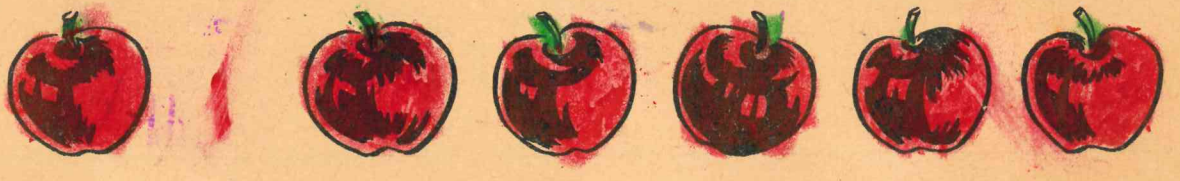


5 apples and 1 apple are 6 apples.

5 and 1 are 6.

5 and 1 are 6.

$$\begin{array}{r} 5 \\ +\ 1 \\ \hline 6 \end{array} \qquad \begin{array}{r} 5 \\ +\ 1 \\ \hline 6 \end{array}$$

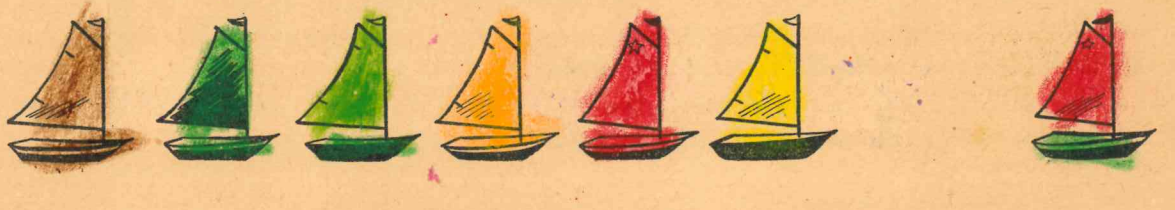


1 apple and 5 apples are 6 apples.

1 and 5 are 6.

1 and 5 are 6.

$$\begin{array}{r} 1 \\ +\ 5 \\ \hline 6 \end{array} \qquad \begin{array}{r} 1 \\ +\ 5 \\ \hline 6 \end{array}$$

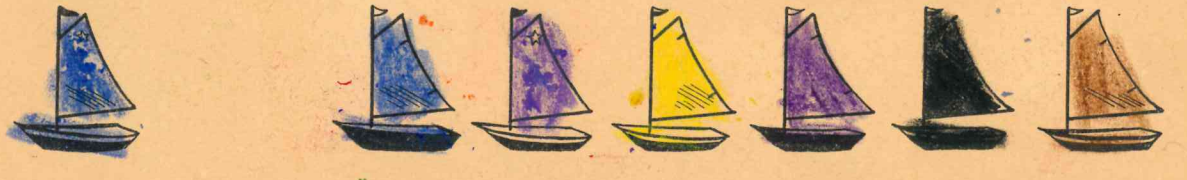


6 boats and 1 boat are 7 boats.

6 and 1 are 7.

6 and 1 are 7.

$$\begin{array}{r} 6 \\ +\ 1 \\ \hline 7 \end{array} \qquad \begin{array}{r} 6 \\ +\ 1 \\ \hline 7 \end{array}$$



1 boat and 6 boats are 7 boats.

1 and 6 are 7.

1 and 6 are 7.

$$\begin{array}{r} 1 \\ +\ 6 \\ \hline 7 \end{array} \qquad \begin{array}{r} 1 \\ +\ 6 \\ \hline 7 \end{array}$$

ADDING

Count the cats. 7 cats and 1 cat are 8 cats.

7 and 1 are 8.

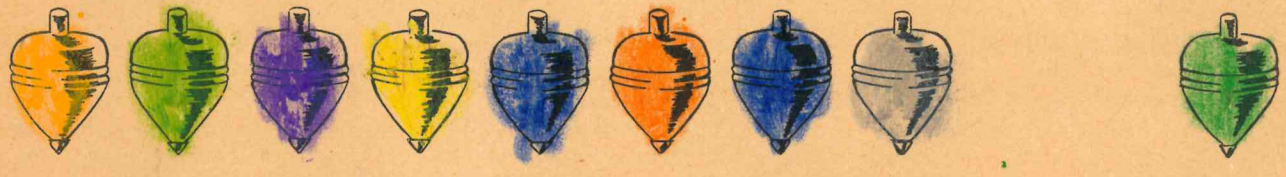
1 cat and 7 cats are 8 cats.

1 and 7 are 8.

7 and 1 are 8.

1 and 7 are 8.

$$\begin{array}{r} 7 \\ 1 \\ \hline 8 \end{array} \qquad \begin{array}{r} 1 \\ 7 \\ \hline 8 \end{array}$$



Count the tops. 8 tops and 1 top are 9 tops.

8 and 1 are 9.

1 top and 8 tops are 9 tops.

1 and 8 are 9.

8 and 1 are 9.

$$\begin{array}{r} 8 \\ 1 \\ \hline 9 \end{array} \qquad \begin{array}{r} 1 \\ 8 \\ \hline 9 \end{array}$$

Add:

$$\begin{array}{r} 7 \\ 1 \\ \hline 8 \end{array} \qquad \begin{array}{r} 1 \\ 8 \\ \hline 9 \end{array} \qquad \begin{array}{r} 8 \\ 1 \\ \hline 9 \end{array} \qquad \begin{array}{r} 1 \\ 5 \\ \hline 6 \end{array} \qquad \begin{array}{r} 1 \\ 7 \\ \hline 8 \end{array} \qquad \begin{array}{r} 3 \\ 1 \\ \hline 4 \end{array} \qquad \begin{array}{r} 8 \\ 1 \\ \hline 9 \end{array} \qquad \begin{array}{r} 1 \\ 1 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 1 \\ 4 \\ \hline 5 \end{array} \qquad \begin{array}{r} 2 \\ 1 \\ \hline 3 \end{array} \qquad \begin{array}{r} 1 \\ 8 \\ \hline 9 \end{array} \qquad \begin{array}{r} 6 \\ 1 \\ \hline 7 \end{array} \qquad \begin{array}{r} 1 \\ 2 \\ \hline 3 \end{array} \qquad \begin{array}{r} 7 \\ 1 \\ \hline 8 \end{array} \qquad \begin{array}{r} 1 \\ 3 \\ \hline 4 \end{array} \qquad \begin{array}{r} 1 \\ 8 \\ \hline 9 \end{array}$$

TO THE TEACHER. Explain to the pupils that *to add* 7 and 1 means to find that 7 and 1 are 8. Show the pupils that when things are added they are put together to find how many there are in all.

FINDING ONE MORE

2 balls and 1 ball are 3 balls.

8 birds and 1 bird are 9 birds.

5 dolls and 1 doll are 6 dolls.

3 boats and 1 boat are 4 boats.

6 apples and 1 apple are 7 apples.

7 pencils and 1 pencil are 8 pencils.

4 rabbits and 1 rabbit are 5 rabbits.

1 and 1 are 2.

1 and 6 are 7.

1 and 5 are 6.

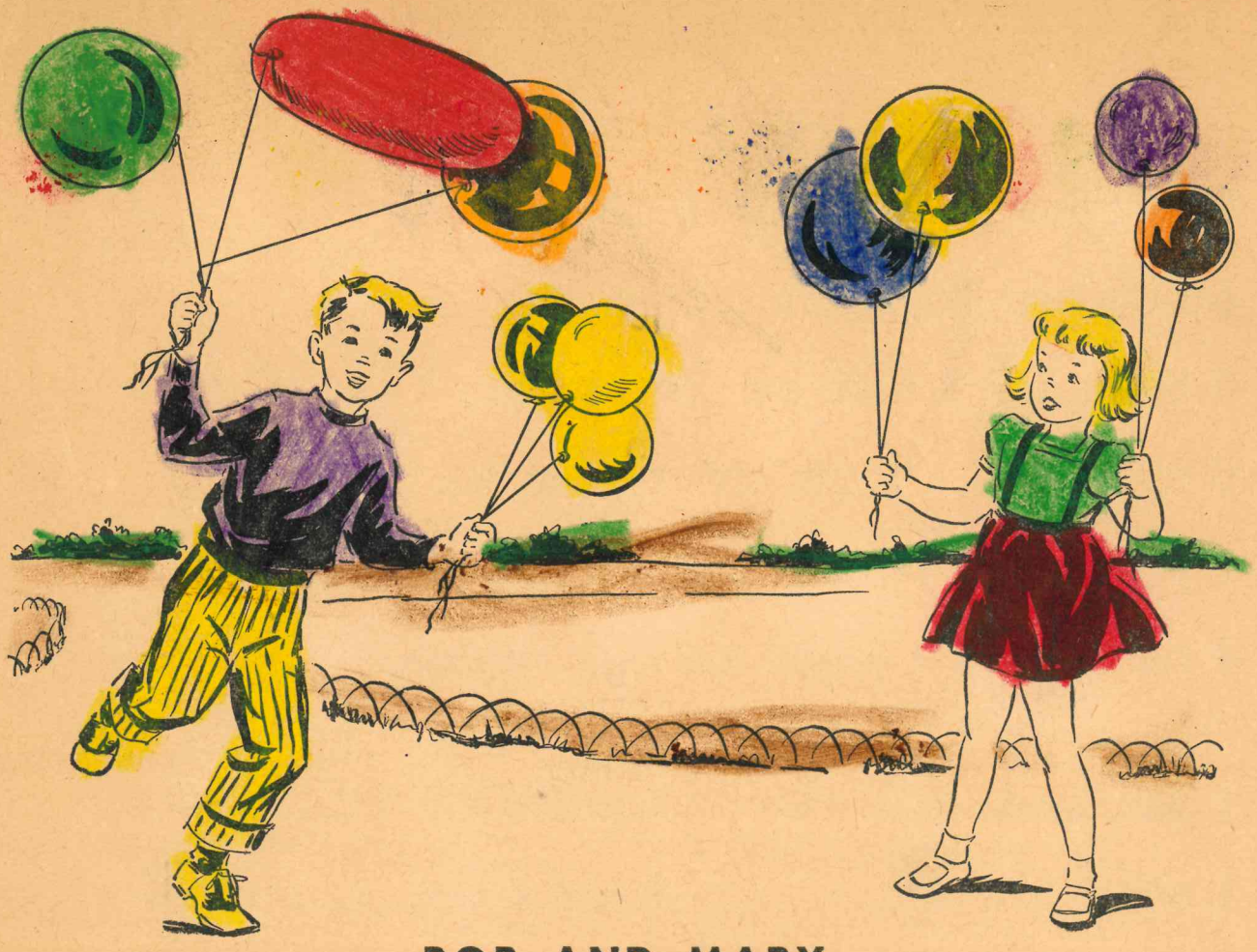
1 and 4 are 5.

1 and 2 are 3.

1 and 3 are 4.

Add:

1 + 3 = 4	4 + 1 = 5	1 + 1 = 2	2 + 1 = 3	6 + 1 = 7	1 + 5 = 6	7 + 1 = 8	3 + 1 = 4
1 + 6 = 7	8 + 1 = 9	5 + 1 = 6	1 + 2 = 3	1 + 1 = 2	1 + 4 = 5	1 + 8 = 9	1 + 7 = 8
4 + 1 = 5	1 + 2 = 3	1 + 7 = 8	5 + 1 = 6	1 + 8 = 9	7 + 1 = 8	1 + 6 = 7	8 + 1 = 9



BOB AND MARY

Bob has 3 large balloons and 3 small balloons.

Bob has __6__ balloons in all.

3 balloons and 3 balloons are __6__ balloons.

3 and 3 are __6__. 3 and 3 are __6__.

$$\begin{array}{r} 3 \\ +\ 3 \\ \hline 6 \end{array}$$

Mary has 2 large balloons and 2 small balloons.

Mary has __4__ balloons in all.

2 balloons and 2 balloons are __4__ balloons.

2 and 2 are __4__. 2 and 2 are __4__.

$$\begin{array}{r} 2 \\ +\ 2 \\ \hline 4 \end{array}$$

3 and 3 are __6__. 2 and 2 are __4__.

2 and 2 are __4__. 1 and 1 are __2__.

FLOWERS

9 flowers and 1 flower are 10 flowers.

9 and 1 are 10.

1 flower and 9 flowers are 10 flowers.

1 and 9 are 10.

9 and 1 are 10.

1 and 9 are 10.

$\begin{array}{r} 9 \\ 1 \\ \hline 10 \end{array}$ $\begin{array}{r} 1 \\ 9 \\ \hline 10 \end{array}$

Draw a line under Yes or No:

Are 9 flowers more than 1 flower?	Yes	No
Are 3 flowers more than 6 flowers?	Yes	No
Are 9 flowers less than 10 flowers?	Yes	No

4 and 1 are 5.

1 and 8 are 9.

2 and 2 are 4.

5 and 1 are 6.

1 and 6 are 7.

3 and 3 are 6.

7 and 1 are 8.

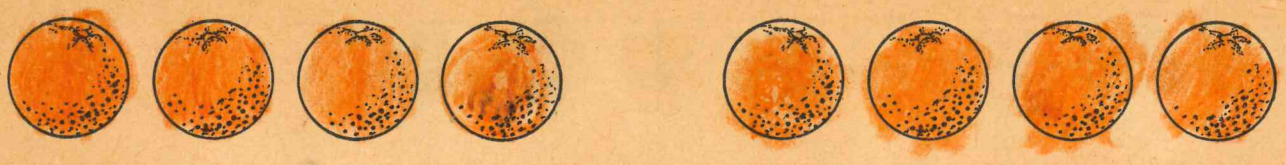
1 and 9 are 10.

Add the numbers:

$\begin{array}{r} 9 \\ 1 \\ \hline 10 \end{array}$ $\begin{array}{r} 1 \\ 7 \\ \hline 8 \end{array}$ $\begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array}$ $\begin{array}{r} 8 \\ 1 \\ \hline 9 \end{array}$ $\begin{array}{r} 1 \\ 4 \\ \hline 5 \end{array}$ $\begin{array}{r} 1 \\ 1 \\ \hline 2 \end{array}$ $\begin{array}{r} 1 \\ 5 \\ \hline 6 \end{array}$ $\begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array}$

TO THE TEACHER. In the exercises which are answered by Yes or No, direct the pupils to draw a line under Yes if the answer is Yes; or under No if the answer is No.

HOW MANY?

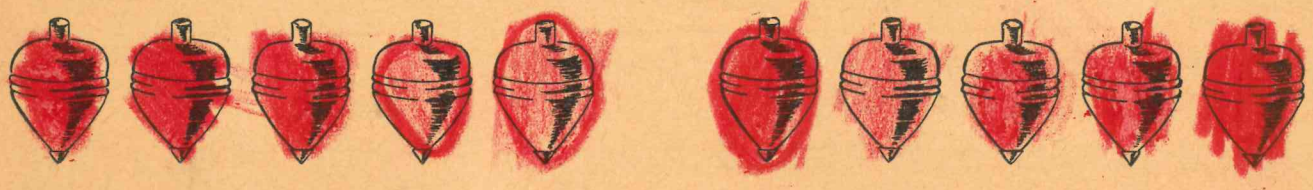


Here are __4__ oranges. Here are __4__ oranges. 4

4 oranges and 4 oranges are __8__ oranges. 4

4 and 4 are __8__. 4 and 4 are __8__.

Are 8 oranges more than 4 oranges? Yes No



Here are __5__ tops. Here are __5__ tops. 5

5 tops and 5 tops are __10__ tops. 5

5 and 5 are __10__. 5 and 5 are __10__.

Are 10 tops less than 5 tops? Yes No

3 dolls and 3 dolls are __6__ dolls.

4 apples and 4 apples are __8__ apples.

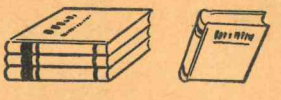
5 rabbits and 5 rabbits are __10__ rabbits.

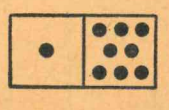
Add these numbers:

4	2	1	9	5	1	3	1
4	2	7	1	5	8	3	6
8	4	8	10	10	9	6	7

ADDING

●○○○○○○○	●●●●○○○○
1 and 7 are 8. $\frac{1}{7}$ $\frac{7}{1}$	4 and 4 are 8. $\frac{4}{4}$ $\frac{4}{4}$
7 and 1 are 8. $\frac{7}{1}$ $\frac{1}{7}$	4 and 4 are 8. $\frac{4}{4}$ $\frac{4}{4}$
●○○○○○	●●●○○○
1 and 5 are 6. $\frac{1}{5}$ $\frac{5}{1}$	3 and 3 are 6. $\frac{3}{3}$ $\frac{3}{3}$
5 and 1 are 6. $\frac{5}{1}$ $\frac{1}{5}$	3 and 3 are 6. $\frac{3}{3}$ $\frac{3}{3}$
●●●●●●○	●●○○
6 and 1 are 7. $\frac{6}{1}$ $\frac{1}{6}$	2 and 2 are 4. $\frac{2}{2}$ $\frac{2}{2}$
1 and 6 are 7. $\frac{1}{6}$ $\frac{6}{1}$	2 and 2 are 4. $\frac{2}{2}$ $\frac{2}{2}$
●○○○○○○○○○	●●●●●○○○○○
1 and 9 are 10. $\frac{1}{9}$ $\frac{9}{1}$	5 and 5 are 10. $\frac{5}{5}$ $\frac{5}{5}$
9 and 1 are 10. $\frac{9}{1}$ $\frac{1}{9}$	5 and 5 are 10. $\frac{5}{5}$ $\frac{5}{5}$

3 books and 1 book are 4 books. 

1 dot and 8 dots are 9 dots. 

4 apples and 1 apple are 5 apples. 

NUMBER NAMES

1 one	2 two	3 three	4 four	5 five
6 six	7 seven	8 eight	9 nine	10 ten

Write the number:

ten 10	seven 7	three 3
six 6	eight 8	ten 10
two 2	five 5	seven 7
nine 9	six 6	two 2
four 4	three 3	five 5
one 1	eight 8	nine 9
five 5	one 1	eight 8
ten 10	seven 7	six 6
four 4	three 3	four 4

To THE TEACHER. Direct the pupils to write after each word the number that goes with it. The first exercise shows how.

WHICH ONE IS RIGHT?

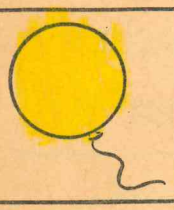
6	one six two
9	nine five one
2	six three two
8	four eight seven
1	one four six
4	five nine four
7	five nine seven

3	three eight ten
5	four five nine
10	ten two four
9	seven eight nine
7	five seven eight
8	eight seven six
10	seven ten three

TO THE TEACHER. Direct the pupils to draw a line under the word that goes with the number at its left. The first exercise shows how.

COUNT AND DRAW

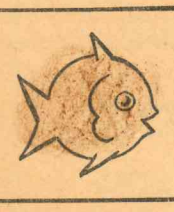
Draw seven balloons.



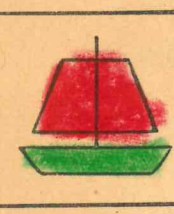
Draw five apples.

Draw four cats.

Draw three fish.



Draw six boats.



Draw eight balls.

CENT, NICKEL, DIME

A PENNY
1 CENT

A NICKEL
5 CENTS

A DIME
10 CENTS

5 cents make 1 nickel.
10 cents make 1 dime.
2 nickels make 1 dime.

1¢ means 1 cent. 5¢ means 5 cents.

make a

make a

Count the money in each line:

6 ¢

9 ¢

HOW MANY ARE LEFT?

I see __3__ cats in all.

Mary takes away 1 cat.

How many cats are left? __2__ cats

1 cat from 3 cats leaves __2__ cats.

1 from 3 leaves __2__.

1 from 3 leaves __2__.

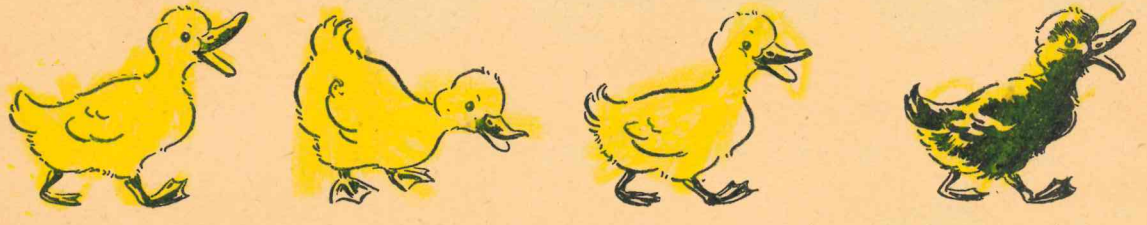
1 from 3 is __2__.

1 from 3 is __2__.

$$\begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array}$$

When you take 1 from 3, you subtract 1 from 3.

– means take away or subtract.



I see __4__ ducks. The black duck runs away.

How many ducks are left? __3__ ducks

1 duck from 4 ducks leaves __3__ ducks.

1 from 4 leaves __3__.

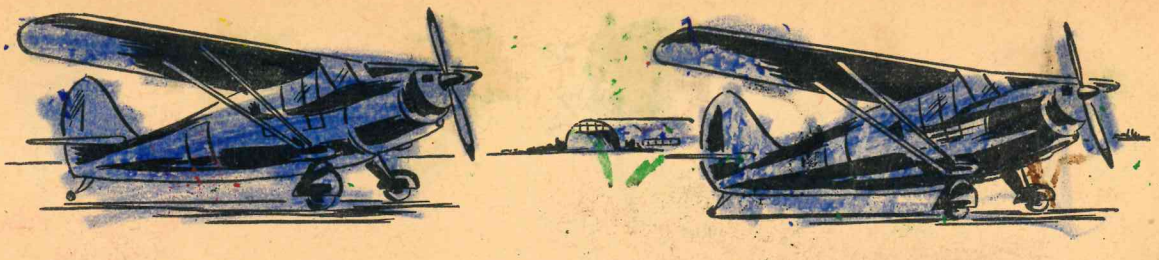
1 from 4 leaves __3__.

1 from 4 is __3__.

1 from 4 is __3__.

$$\begin{array}{r} 4 \\ -\,1 \\ \hline 3 \end{array}$$

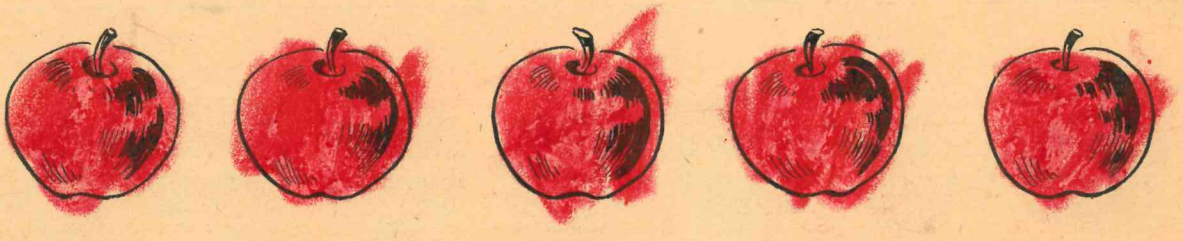
HOW MANY ARE LEFT?



I see 2 airplanes. 1 airplane flies away.
How many airplanes are left? 1 airplane
1 airplane from 2 airplanes leaves 1 airplane.

$$\begin{array}{r} 2 \\ -\,1 \\ \hline 1 \end{array}$$

1 from 2 leaves 1. 1 from 2 is 1.
1 from 2 leaves 1. 1 from 2 is 1.



These are Jim's apples. He has 5 apples.
Jim gives away 1 apple.
How many apples are left? 4 apples
1 apple from 5 apples leaves 4 apples.

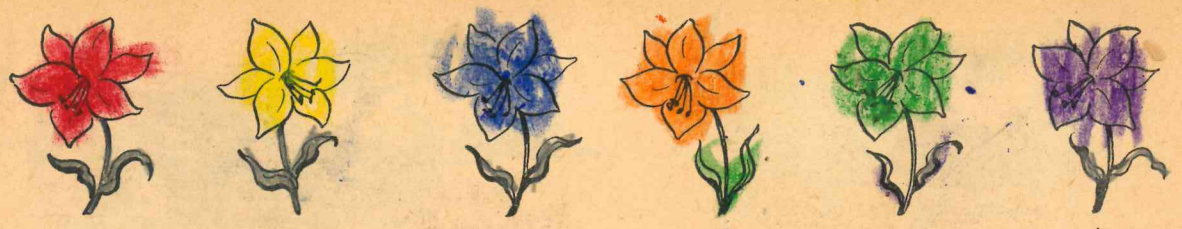
$$\begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array}$$

1 from 5 leaves 4. 1 from 5 is 4.
1 from 5 leaves 4. 1 from 5 is 4.

Subtract the numbers:

$$\begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array} \quad \begin{array}{r} 2 \\ -\,1 \\ \hline 1 \end{array} \quad \begin{array}{r} 4 \\ -\,1 \\ \hline 3 \end{array} \quad \begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array} \quad \begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array} \quad \begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array} \quad \begin{array}{r} 2 \\ -\,1 \\ \hline 1 \end{array} \quad \begin{array}{r} 4 \\ -\,1 \\ \hline 3 \end{array}$$

SUBTRACTING



Mary has 6 flowers. Count them.

Mary gives 1 flower to Mother.

Then Mary has 5 flowers left.

1 flower from 6 flowers leaves 5 flowers.

1 from 6 leaves 5. 1 from 6 is 5.

1 from 6 leaves 5. 1 from 6 is 5.

$$\begin{array}{r} 6 \\ -\,1 \\ \hline 5 \end{array}$$

Jim has 7 cents. He spends 1 cent for candy.

Then Jim has 6 cents left.

1 cent from 7 cents leaves 6 cents.

1 from 7 leaves 6. 1 from 7 is 6.

1 from 7 leaves 6. 1 from 7 is 6.

$$\begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array}$$

Subtract the numbers:

$$\begin{array}{r} 6 \\ -\,1 \\ \hline 5 \end{array} \quad \begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ -\,1 \\ \hline 1 \end{array} \quad \begin{array}{r} 6 \\ -\,1 \\ \hline 5 \end{array} \quad \begin{array}{r} 4 \\ -\,1 \\ \hline 3 \end{array} \quad \begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array} \quad \begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array}$$

RABBITS

Jack and Betty have __9__ rabbits.

1 rabbit runs away. Then __8__ rabbits are left.

$$\begin{array}{r} 9 \\ -\,1 \\ \hline 8 \end{array}$$

1 from 9 leaves __8__. 1 from 9 is __8__.

1 from 9 leaves __8__. 1 from 9 is __8__.

Now they have 8 rabbits. 1 more rabbit runs away.

Then they have only __7__ rabbits left.

$$\begin{array}{r} 8 \\ -\,1 \\ \hline 7 \end{array}$$

1 from 8 leaves __7__. 1 from 8 is __7__.

1 from 8 leaves __7__. 1 from 8 is __7__.

1 from 6 leaves __5__. 1 from 8 is __7__.

1 from 5 leaves __4__. 1 from 7 is __6__.

1 from 9 leaves __8__. 1 from 4 is __3__.

1 from 3 leaves __2__. 1 from 2 is __1__.

RABBITS

Jack and Betty have __9__ rabbits.

1 rabbit runs away. Then __8__ rabbits are left.

$$\begin{array}{r} 9 \\ -\,1 \\ \hline 8 \end{array}$$

1 from 9 leaves __8__.

1 from 9 leaves __8__.

1 from 9 is __8__.

1 from 9 is __8__.

Now they have 8 rabbits. 1 more rabbit runs away.

Then they have only __7__ rabbits left.

$$\begin{array}{r} 8 \\ -\,1 \\ \hline 7 \end{array}$$

1 from 8 leaves __7__.

1 from 8 leaves __7__.

1 from 8 is __7__.

1 from 8 is __7__.

1 from 6 leaves __5__.

1 from 5 leaves __4__.

1 from 9 leaves __8__.

1 from 3 leaves __2__.

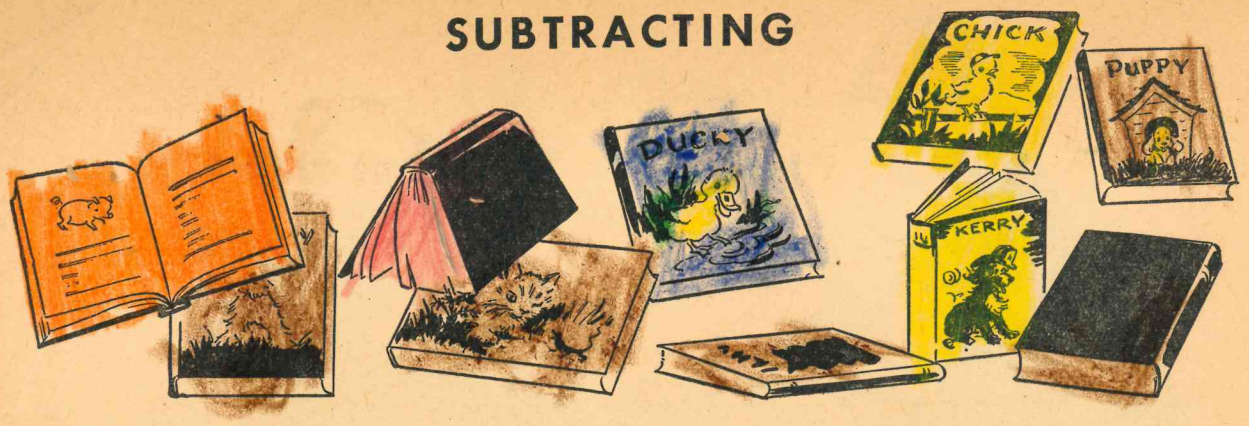
1 from 8 is __7__.

1 from 7 is __6__.

1 from 4 is __3__.

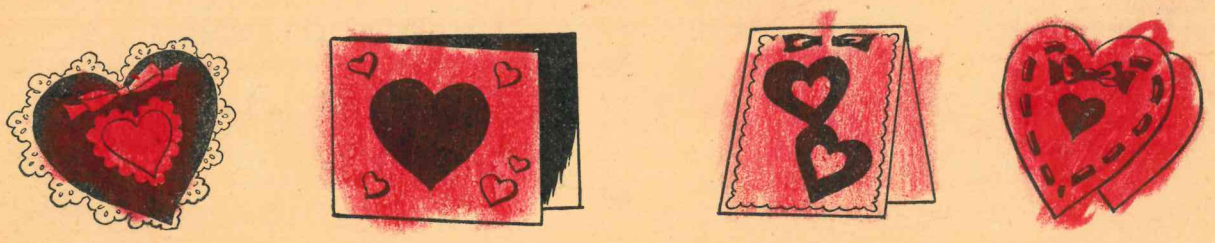
1 from 2 is __1__.

SUBTRACTING



I see 10 books. Jack takes away 1 book.
How many books are left? 9 books
1 book from 10 books leaves 9 books.
1 from 10 leaves 9.
1 from 10 leaves 9.
1 from 10 is 9.
1 from 10 is 9.

$$\begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array}$$



Betty has 4 valentines. Count them.
Betty sends away 2 valentines.
How many valentines are left? 2 valentines
2 from 4 leaves 2.
2 from 4 leaves 2.
2 from 4 is 2.
2 from 4 is 2.

$$\begin{array}{r} 4 \\ -\ 2 \\ \hline 2 \end{array}$$

Subtract these numbers:

$$\begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array} \quad \begin{array}{r} 6 \\ -\ 1 \\ \hline 5 \end{array} \quad \begin{array}{r} 4 \\ -\ 2 \\ \hline 2 \end{array} \quad \begin{array}{r} 9 \\ -\ 1 \\ \hline 8 \end{array} \quad \begin{array}{r} 3 \\ -\ 1 \\ \hline 2 \end{array} \quad \begin{array}{r} 4 \\ -\ 2 \\ \hline 2 \end{array} \quad \begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array} \quad \begin{array}{r} 7 \\ -\ 1 \\ \hline 6 \end{array}$$

ADDING AND SUBTRACTING

 5 and 1 are 6. 1 from 6 is 5.	 8 and 1 are 9. 1 from 9 is 8.
 2 and 2 are 4. 2 from 4 is 2.	 3 and 1 are 4. 1 from 4 is 3.
 6 and 1 are 7. 1 from 7 is 6.	 7 and 1 are 8. 1 from 8 is 7.
 4 and 1 are 5. 1 from 5 is 4.	 9 and 1 are 10. 1 from 10 is 9.

Subtract:

8 - 1 7	4 - 2 2	3 - 1 2	10 - 1 9	7 - 1 6	5 - 1 4	9 - 1 8	4 - 1 3
4 - 2 2	9 - 1 8	6 - 1 5	4 - 1 3	2 - 1 1	10 - 1 9	7 - 1 6	8 - 1 7

PUPPIES

Mary and Jack have 6 puppies. Count them.
The children will sell 3 puppies.
Then they will have 3 puppies left.
3 puppies from 6 puppies leaves 3 puppies.
3 from 6 leaves 3.
3 from 6 leaves 3.
3 from 6 is 3.
3 from 6 is 3.

$$\begin{array}{r} 6 \\ -\,3 \\ \hline 3 \end{array}$$

I see 8 birds in all. 4 birds fly away.
How many birds are left? 4 birds
4 birds from 8 birds leaves 4 birds.
4 from 8 leaves 4.
4 from 8 is 4.

$$\begin{array}{r} 8 \\ -\,4 \\ \hline 4 \end{array}$$

Subtract these numbers:

$$\begin{array}{r} 9 \\ -\,1 \\ \hline 8 \end{array} \quad \begin{array}{r} 6 \\ -\,1 \\ \hline 5 \end{array} \quad \begin{array}{r} 6 \\ -\,3 \\ \hline 3 \end{array} \quad \begin{array}{r} 8 \\ -\,4 \\ \hline 4 \end{array} \quad \begin{array}{r} 10 \\ -\,1 \\ \hline 9 \end{array} \quad \begin{array}{r} 4 \\ -\,2 \\ \hline 2 \end{array} \quad \begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array}$$

SUBTRACTING

Mary has 10 cakes. She gives 5 cakes to Jane.
Then Mary has 5 cakes left.
5 cakes from 10 cakes leaves 5 cakes.
5 from 10 leaves 5.
5 from 10 leaves 5.
5 from 10 is 5.
5 from 10 is 5.

$$\begin{array}{r} 10 \\ -\,5 \\ \hline 5 \end{array}$$

Subtract these numbers:

$$\begin{array}{r} 10 \\ -\,5 \\ \hline 5 \end{array} \qquad \begin{array}{r} 6 \\ -\,3 \\ \hline 3 \end{array} \qquad \begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array} \qquad \begin{array}{r} 4 \\ -\,2 \\ \hline 2 \end{array} \qquad \begin{array}{r} 9 \\ -\,1 \\ \hline 8 \end{array} \qquad \begin{array}{r} 2 \\ -\,1 \\ \hline 1 \end{array} \qquad \begin{array}{r} 8 \\ -\,4 \\ \hline 4 \end{array}$$

Add the numbers when you see +. + means and.
Subtract the numbers when you see −

$$\begin{array}{r} 4 \\ +\,4 \\ \hline 8 \end{array} \qquad \begin{array}{r} 8 \\ -\,1 \\ \hline 7 \end{array} \qquad \begin{array}{r} 1 \\ +\,7 \\ \hline 8 \end{array} \qquad \begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array} \qquad \begin{array}{r} 3 \\ +\,3 \\ \hline 6 \end{array} \qquad \begin{array}{r} 10 \\ -\,1 \\ \hline 9 \end{array} \qquad \begin{array}{r} 4 \\ +\,1 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array} \qquad \begin{array}{r} 9 \\ +\,1 \\ \hline 10 \end{array} \qquad \begin{array}{r} 4 \\ -\,1 \\ \hline 3 \end{array} \qquad \begin{array}{r} 1 \\ +\,6 \\ \hline 7 \end{array} \qquad \begin{array}{r} 10 \\ -\,5 \\ \hline 5 \end{array} \qquad \begin{array}{r} 2 \\ +\,2 \\ \hline 4 \end{array} \qquad \begin{array}{r} 6 \\ -\,1 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 1 \\ +\,8 \\ \hline 9 \end{array} \qquad \begin{array}{r} 5 \\ +\,5 \\ \hline 10 \end{array} \qquad \begin{array}{r} 4 \\ -\,2 \\ \hline 2 \end{array} \qquad \begin{array}{r} 3 \\ +\,1 \\ \hline 4 \end{array} \qquad \begin{array}{r} 6 \\ -\,3 \\ \hline 3 \end{array} \qquad \begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array} \qquad \begin{array}{r} 1 \\ +\,9 \\ \hline 10 \end{array}$$

TO THE TEACHER. For suggestions concerning this page, see the last pages of this book.

ADDING AND SUBTRACTING

Write the answers:

●●●● ● 4 + 1 = 5 5 − 1 = 4	●●● ●●● 3 + 3 = 6 6 − 3 = 3	●●●●●●●●● ● 9 + 1 = 10 10 − 1 = 9
★★★ ★ 3 + 1 = 4 4 − 1 = 3	★★★★★ ★ 5 + 1 = 6 6 − 1 = 5	★★★★★★★ ★ 7 + 1 = 8 8 − 1 = 7
●● ●● 2 + 2 = 4 4 − 2 = 2	●●●●●● ● 6 + 1 = 7 7 − 1 = 6	●●●●●●●● ● 8 + 1 = 9 9 − 1 = 8
★ ★ 1 + 1 = 2 2 − 1 = 1	★★★ ★★★ 3 + 3 = 6 6 − 3 = 3	★★★★ ★★★★ 4 + 4 = 8 8 − 4 = 4
●● ● 2 + 1 = 3 3 − 1 = 4	●●●● ●●●● 4 + 4 = 8 8 − 4 = 4	●●●●● ●●●●● 5 + 5 = 10 10 − 5 = 6

NUMBER STORIES

1. There are 4 girls and 1 boy playing. There are 5 children playing in all.

$$\begin{array}{r} 4 \\ +\,1 \\ \hline 5 \end{array}$$

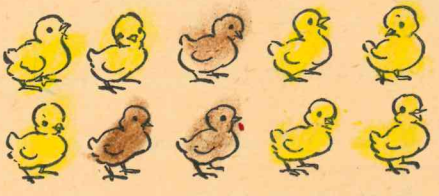
2. Mary had 3 big apples. She ate 1 apple. She had 2 apples left.

$$\begin{array}{r} 3 \\ -\,1 \\ \hline 2 \end{array}$$

3. Mother gave Tom 8 cents. He spent 4 cents. Then Tom had 4 cents left.

$$\begin{array}{r} 8 \\ -\,4 \\ \hline 4 \end{array}$$

4. Ann has 5 chickens. Jim has 5 chickens. They both have 10 chickens.



$$\begin{array}{r} 5 \\ +\,5 \\ \hline 10 \end{array}$$

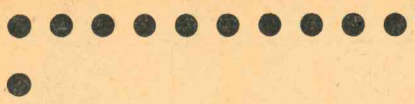
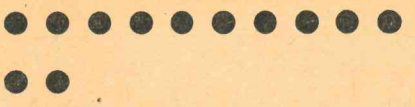
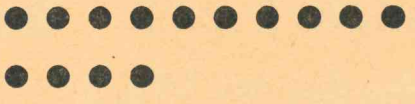
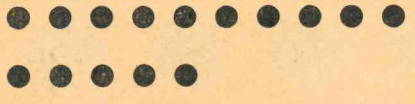
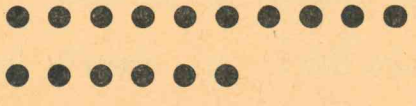
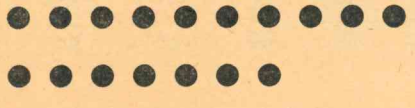
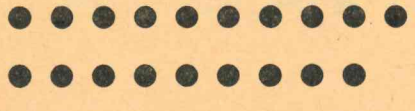
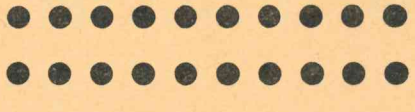
5. Jack saw 8 birds. Then 1 bird flew away. There were 7 birds left.

$$\begin{array}{r} 8 \\ -\,1 \\ \hline 7 \end{array}$$

6. Ann had 2 black puppies. Then Joe gave her 1 white puppy. Now she has 3 puppies in all.

$$\begin{array}{r} 2 \\ +\,1 \\ \hline 3 \end{array}$$

NUMBERS 11 TO 20

 I see 10 dots and 1 dot. 10 and 1 are 11.	 I see 10 dots and 2 dots. 10 and 2 are 12.
 I see 10 dots and 3 dots. 10 and 3 are 13.	 I see 10 dots and 4 dots. 10 and 4 are 14.
 I see 10 dots and 5 dots. 10 and 5 are 15.	 I see 10 dots and 6 dots. 10 and 6 are 16.
 I see 10 dots and 7 dots. 10 and 7 are 17.	 I see 10 dots and 8 dots. 10 and 8 are 18.
 I see 10 dots and 9 dots. 10 and 9 are 19.	 I see 10 dots and 10 dots. 10 and 10 are 20.

TO THE TEACHER. An understanding of our number system can be given by using a bead frame or bundles of 10 pencils. Have the pupils look at a bundle of 10 pencils and 3 more pencils and say "10 pencils and 3 pencils are 13 pencils."

NUMBERS TO 20

Write the numbers:

11	12	13	14	15
11	12	13	14	15
11	12	13	14	15
16	17	18	19	20
16	17	18	19	20
16	17	18	19	20

Write the two numbers that come after:

15	16	17
11	12	13
18	19	20
13	14	15
10	11	12

Write the number that comes before:

14	15
18	19
11	12
15	16
19	20

COUNTING MONEY

A dime  is the same as 10 cents.

Count the money. How many cents in each line?

13 ¢

15 ¢

12 ¢

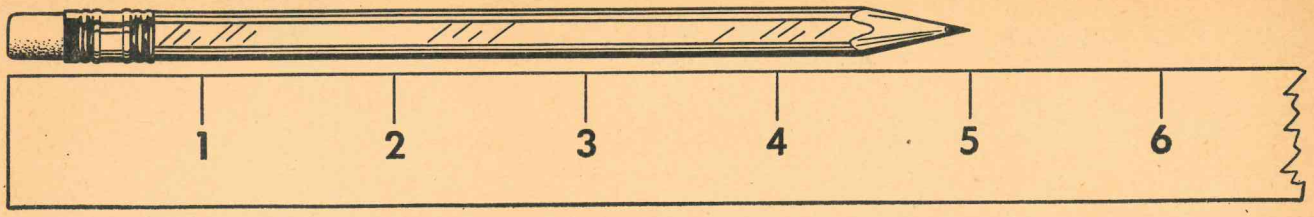
16 ¢

13 ¢

20 ¢

TO THE TEACHER. The use of actual coins or of "toy money" will make this page on coins more real to the children.

INCH



This ruler is a little more than 6 inches long.
You need a ruler to measure things.
The pencil above is 5 inches long.
Jack's ruler is 12 inches long.

Measure these lines with your ruler:

_____ 3 inches

_____ 2 inches

_____ 1 inch

_____ 4 inches

_____ 5 inches

_____ 6 inches

Is this book more than 7 inches wide? Yes ✓ No

How many inches long is this book? 11 inches

How many inches long is your ruler? 12 inches

To the Teacher. Show the children that 2 inches is the length from the left end of the ruler to the line marked 2, that 3 inches is the length from the left end to the line marked 3, etc. Also show the children that when they measure anything they must place the left end of the ruler at one end of the article that is being measured.

YES OR NO

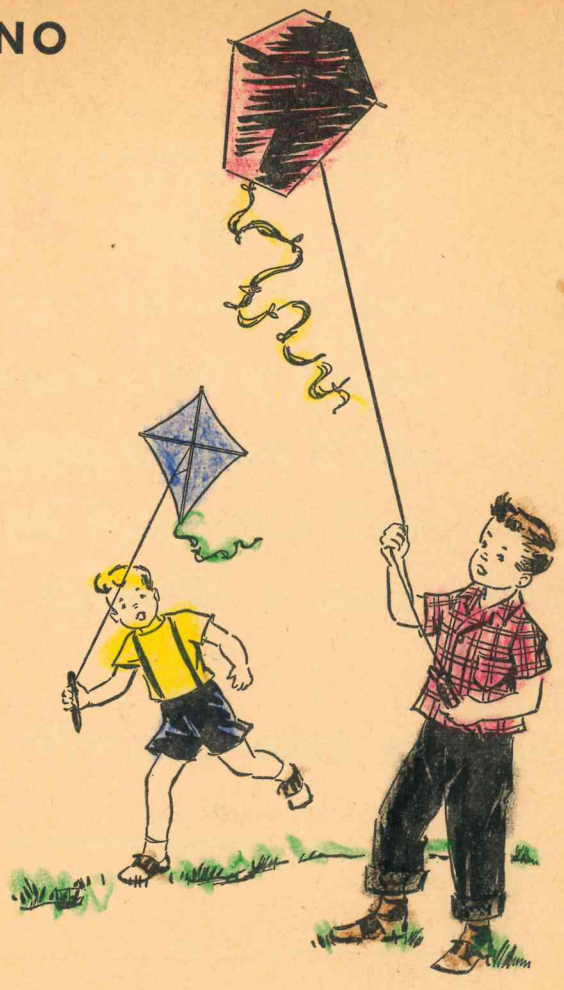
Draw a line under Yes or No:

Is Bob a tall boy?
Yes No

Is Jim taller than Bob?
Yes No

Is Jim's string long?
Yes No

Is Bob's string longer than Jim's?
Yes No



Bob Jim

Is Ann a tall girl?
Yes No

Is Ann shorter than Mary?
Yes No

Is Mary's doll larger than Ann's?
Yes No

Ann Mary

TO THE TEACHER. Ask the children other questions about the pictures above.

HOW MANY DOLLS?

Here are 3 dolls.

3 dolls and 2 dolls are 4 dolls.

3 and 2 are 5.

3 and 2 are 5.

Here are 2 dolls.

3 and 2 are 5.

3 and 2 are 5.

$$\begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array}$$

Here are 2 dolls.

2 dolls and 3 dolls are 5 dolls.

2 and 3 are 5.

2 and 3 are 5.

Here are 3 dolls.

2 and 3 are 5.

2 and 3 are 5.

$$\begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array}$$

Add the numbers:

$$\begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array} \quad \begin{array}{r} 4 \\ 1 \\ \hline 5 \end{array} \quad \begin{array}{r} 1 \\ 9 \\ \hline 10 \end{array} \quad \begin{array}{r} 5 \\ 5 \\ \hline 10 \end{array} \quad \begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 4 \\ 4 \\ \hline 8 \end{array} \quad \begin{array}{r} 5 \\ 1 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 1 \\ 6 \\ \hline 7 \end{array} \quad \begin{array}{r} 8 \\ 1 \\ \hline 9 \end{array} \quad \begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array} \quad \begin{array}{r} 1 \\ 3 \\ \hline 4 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array}$$

CLOWNS

I see __4__ clowns with pigs.

I see __2__ clowns on a horse.

4 clowns and 2 clowns are __6__ clowns.

4 and 2 are __6__. 4 and 2 are __6__.

2 clowns and 4 clowns are __6__ clowns.

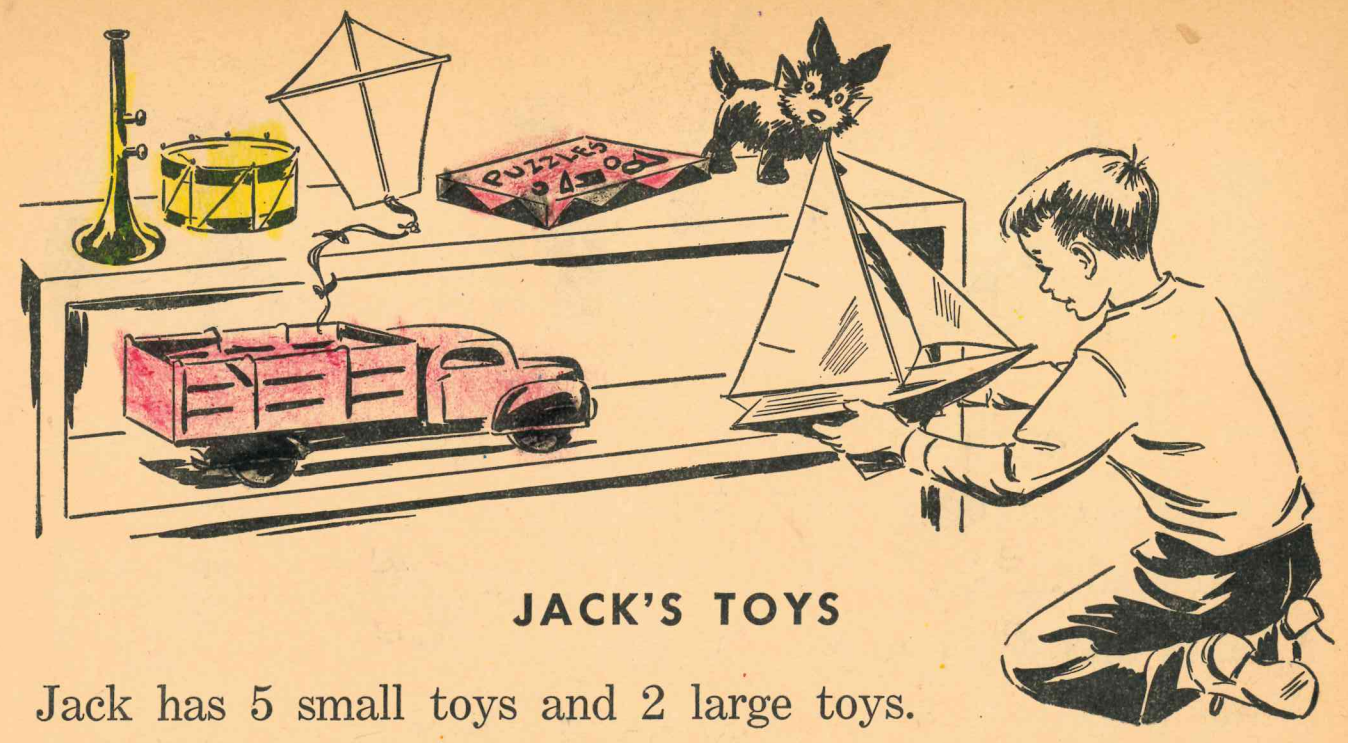
2 and 4 are __6__. 2 and 4 are __6__.

$$\begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array} \qquad \begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array}$$

Add the numbers:

$$\begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array} \quad \begin{array}{r} 2 \\ 1 \\ \hline 3 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 1 \\ 2 \\ \hline 3 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 1 \\ 2 \\ \hline 3 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array}$$



JACK'S TOYS

Jack has 5 small toys and 2 large toys.

Jack has 7 toys in all.

5 and 2 are 7. 5 and 2 are 7.

2 toys and 5 toys are 7 toys.

2 and 5 are 7. 2 and 5 are 7.

$$\begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array} \qquad \begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array}$$

Are 5 toys less than 7 toys? Yes No

Are 2 toys more than 7 toys? Yes No

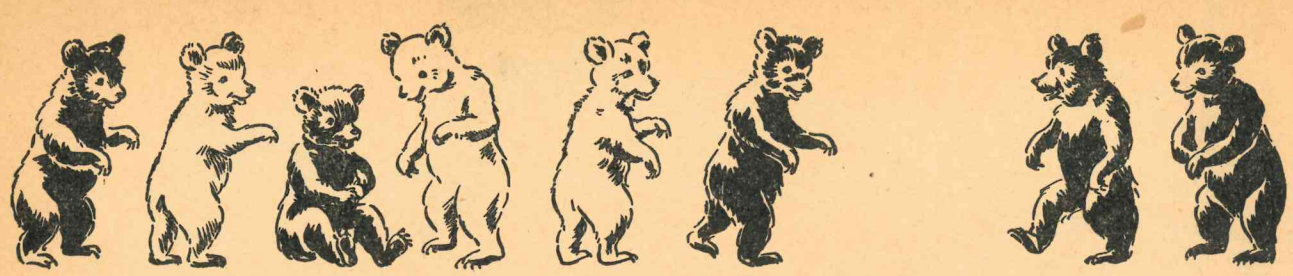
Are 2 toys more than 1 toy? Yes No

Add the numbers:

$$\begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array} \quad \begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array} \quad \begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array} \quad \begin{array}{r} 4 \\ 4 \\ \hline 8 \end{array} \quad \begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 1 \\ 7 \\ \hline 8 \end{array} \quad \begin{array}{r} 5 \\ 5 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 1 \\ \hline 3 \end{array} \quad \begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array}$$

BEARS



Here are 6 bears. Here are 2 bears.

6 bears and 2 bears are 8 bears.

6 and 2 are 8. 6 and 2 are 8.

2 bears and 6 bears are 8 bears.

2 and 6 are 8. 2 and 6 are 8.

$$\begin{array}{r} 6 \\ +\ 2 \\ \hline 8 \end{array} \qquad \begin{array}{r} 2 \\ +\ 6 \\ \hline 8 \end{array}$$

 and  are 8 bears.

 and  are 8 bears.

 and  are 7 bears.

 and  are 7 bears.

Add the numbers:

$$\begin{array}{r} 6 \\ +\ 2 \\ \hline 8 \end{array} \qquad \begin{array}{r} 2 \\ +\ 4 \\ \hline 6 \end{array} \qquad \begin{array}{r} 5 \\ +\ 5 \\ \hline 10 \end{array} \qquad \begin{array}{r} 2 \\ +\ 6 \\ \hline 8 \end{array} \qquad \begin{array}{r} 3 \\ +\ 2 \\ \hline 5 \end{array} \qquad \begin{array}{r} 4 \\ +\ 2 \\ \hline 6 \end{array} \qquad \begin{array}{r} 4 \\ +\ 4 \\ \hline 8 \end{array} \qquad \begin{array}{r} 5 \\ +\ 2 \\ \hline 7 \end{array}$$

BALLOONS

The balloon man has __7__ balloons.

The children have __2__ balloons.

I see __9__ balloons in all.

7 balloons and 2 balloons are __9__ balloons.

7 and 2 are __9__.

7 and 2 are __9__.

2 balloons and 7 balloons are __9__ balloons.

2 and 7 are __9__.

2 and 7 are __9__.

$$\begin{array}{r} 7 \\ 2 \\ \hline 9 \end{array} \qquad \begin{array}{r} 2 \\ 7 \\ \hline 9 \end{array}$$

2 balls and 3 balls are __5__ balls.

4 birds and 2 birds are __6__ birds.

2 boys and 6 boys are __8__ boys.

5 dogs and 5 dogs are __10__ dogs.

2 cats and 5 cats are __7__ cats.

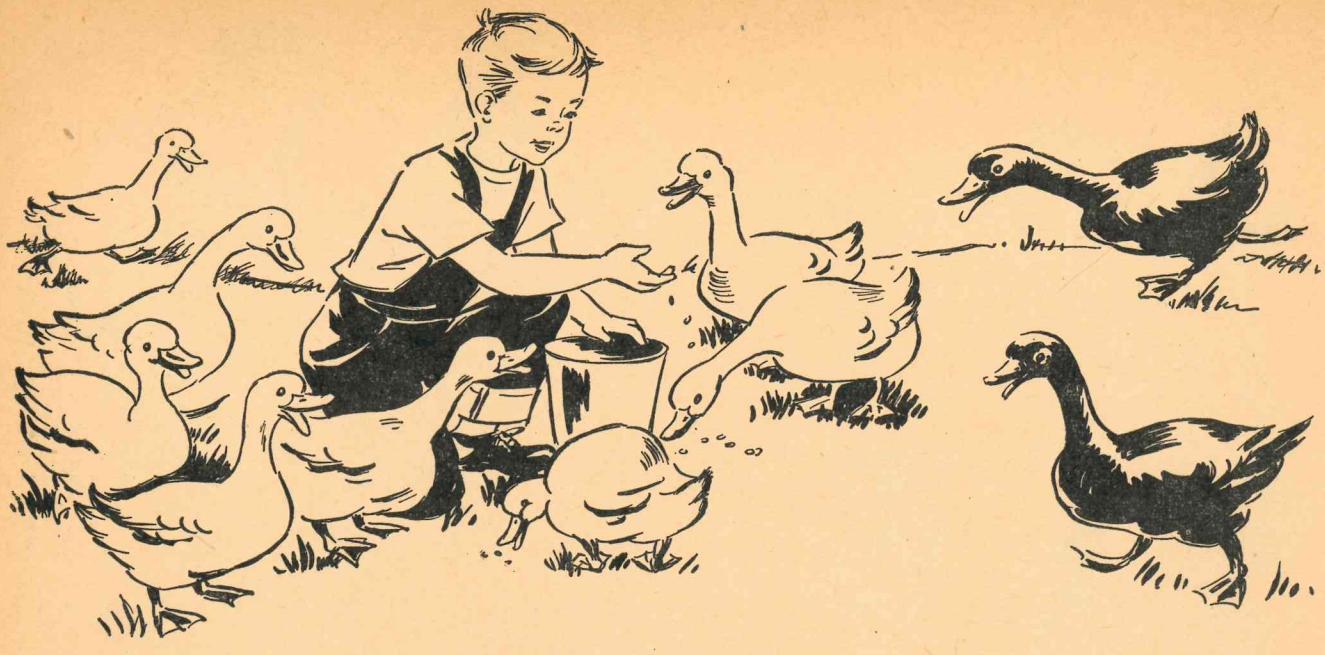
4 and 4 are __8__.

1 and 9 are __10__.

3 and 3 are __6__.

2 and 7 are __9__.

2 and 2 are __4__.



BOB'S DUCKS

Bob has 8 white ducks and 2 black ducks.

Bob has 10 ducks in all.

8 ducks and 2 ducks are 10 ducks.

8 and 2 are 10.

8 and 2 are 10.

$$\begin{array}{r} 8 \\ 2 \\ \hline 10 \end{array} \qquad \begin{array}{r} 8 \\ 2 \\ \hline 10 \end{array}$$

2 ducks and 8 ducks are 10 ducks.

2 and 8 are 10.

2 and 8 are 10.

2 and 8 are 10.

2 and 8 are 10.

$$\begin{array}{r} 2 \\ 8 \\ \hline 10 \end{array} \qquad \begin{array}{r} 2 \\ 8 \\ \hline 10 \end{array}$$

Add the numbers:

$$\begin{array}{r} 8 \\ 2 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 8 \\ \hline 10 \end{array} \quad \begin{array}{r} 7 \\ 2 \\ \hline 9 \end{array} \quad \begin{array}{r} 2 \\ 6 \\ \hline 8 \end{array} \quad \begin{array}{r} 2 \\ 8 \\ \hline 10 \end{array} \quad \begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array} \quad \begin{array}{r} 8 \\ 2 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 5 \\ 5 \\ \hline 10 \end{array} \quad \begin{array}{r} 9 \\ 1 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 4 \\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 2 \\ 7 \\ \hline 9 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 6 \\ 2 \\ \hline 8 \end{array}$$

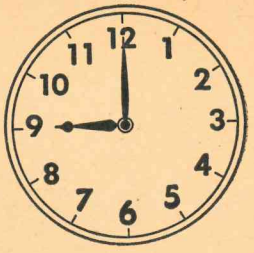
TELLING TIME

This clock says 9 o'clock.

The short hand is at 9.

The long hand is at 12.

School begins at 9 o'clock.

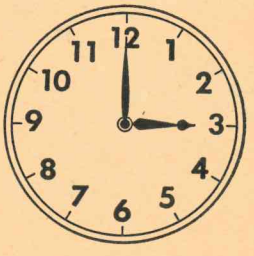


This clock says 3 o'clock.

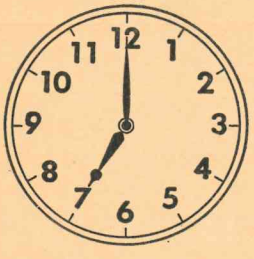
The short hand is at 3.

The long hand is at 12.

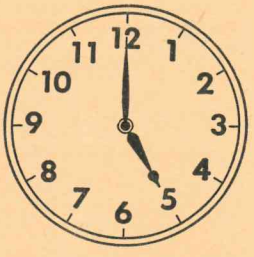
School is out at 3 o'clock.



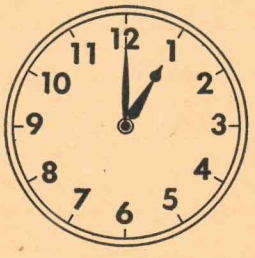
Under each clock write the time it shows:



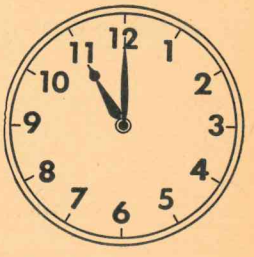
7 o'clock



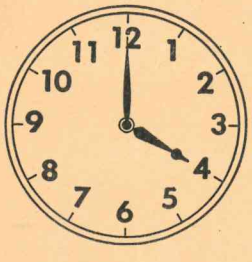
5 o'clock



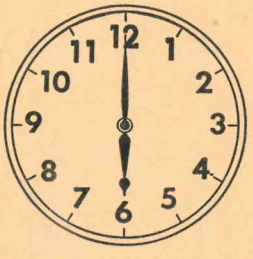
1 o'clock



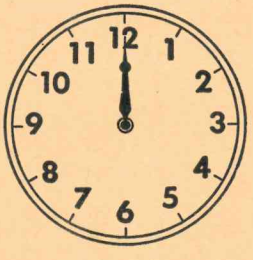
11 o'clock



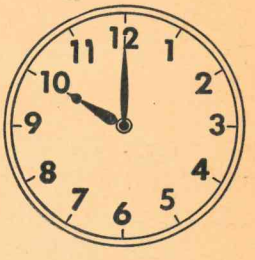
4 o'clock



6 o'clock



12 o'clock



10 o'clock

TO THE TEACHER. Before assigning this page, explain to the children how to tell time when the clock shows the exact hour, such as 3 o'clock, 9 o'clock, etc. Make clear that on the hour the long hand points to 12 while the short hand points to the number that tells the hour. A cardboard model of a clock face, with movable hands, is helpful in teaching this topic.

NUMBERS TO 20

On page 4 there are 10 birds.

On page 9 there are 4 boats.

On page 9 there are 12 apples.

On page 1 there are 2 pencils.

On page 10 there are 3 cats.

On page 14 there are 8 oranges.

On page 13 there are 10 flowers.

On page 12 there are 10 balloons.

Write the numbers that are left out:

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	

17 comes after 16.

12 comes after 11.

20 comes after 19.

14 comes before 15.

11 comes before 12.

16 comes before 17.

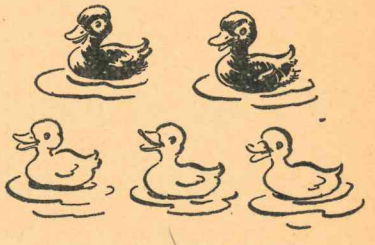
TO THE TEACHER. The exercises at the top of this page apply to the pages of this book. After finding the given page, the pupil should count all the objects of the kind mentioned in the exercise and write the number in the space. When the objects appear in two different pictures on the same page, he should count all the objects in both pictures; for example, on page 9, he should count all the boats in both pictures. If the page contains other objects besides those mentioned in the exercise, only those mentioned should be counted; for example, on page 1, one finds pencils and other objects, but only the pencils should be counted.

NUMBER STORIES

1. Ann had 4 cents. Mother gave her 2 cents. Then Ann had _6_ cents.
   4 cents and 2 cents are _6_ cents.

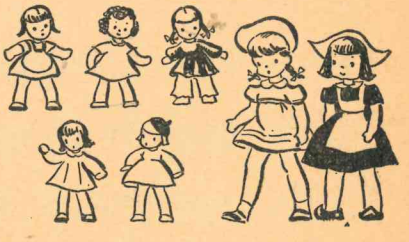
2. Jack had 6 cents. He spent 1 cent.
   Then Jack had _5_ cents left.
   1 cent from 6 cents is _5_ cents.

3. Jim has 2 black ducks and 3 yellow ducks. Jim has _5_ ducks.
   2 ducks and 3 ducks are _5_ ducks.
   3 ducks and 2 ducks are _5_ ducks.

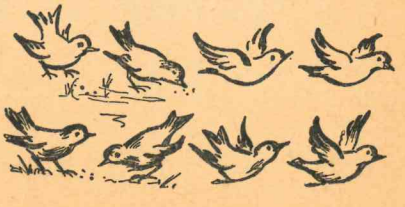


4. Bob had 4 nuts. He ate 2 nuts.
   Bob had _2_ nuts left.
   2 nuts from 4 nuts is _2_ nuts.

5. Jane has 5 little dolls and 2 big dolls. Jane has _7_ dolls.
   5 dolls and 2 dolls are _7_ dolls.
   2 dolls and 5 dolls are _7_ dolls.



6. Joe saw 8 birds. Then 4 birds flew away. There were _4_ birds left.
   4 birds from 8 birds is _4_ birds.



BUYING CANDY

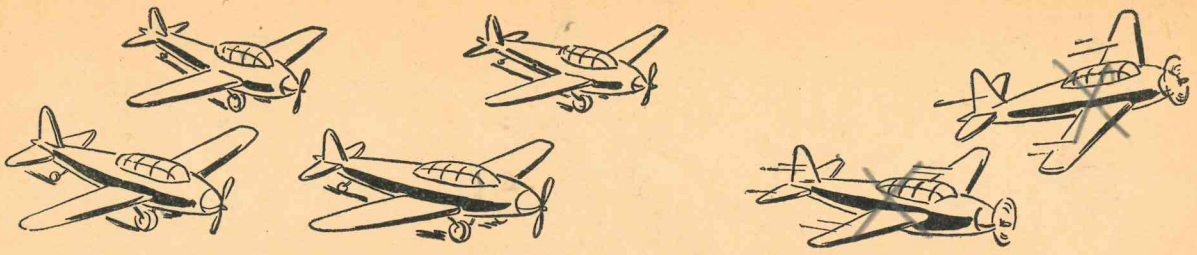
Bill has 3 cents in all.
He spends 2 cents for candy.
Cross out the 2 cents he spends.
Bill has __1__ cent left.
2 cents from 3 cents leaves __1__ cent.
2 from 3 is __1__. 2 from 3 is __1__.
2 from 3 is __1__. 2 from 3 is __1__.

$$\begin{array}{r} 3 \\ -\,2 \\ \hline 1 \end{array}$$

Mary has 5 cents in all.
Mary spends 2 cents for candy.
Cross out the 2 cents she spends.
Mary has __3__ cents left.
2 cents from 5 cents leaves __3__ cents.
2 from 5 is __3__. 2 from 5 is 3 __.
2 from 5 is __3__. 2 from 5 is __3__.

$$\begin{array}{r} 5 \\ -\,2 \\ \hline 3 \end{array}$$

SUBTRACTING



Jack saw 6 airplanes in all. Count them.
Then 2 airplanes flew away. Cross them out.
That left only 4 airplanes.
2 from 6 leaves 4. 2 from 6 is 4.

$$\begin{array}{r} 6 \\ -\,2 \\ \hline 4 \end{array} \qquad \begin{array}{r} 6 \\ -\,2 \\ \hline 4 \end{array}$$

Ann has these 7 cookies. Count them.
Ann eats 2 cookies. Cross them out.
Then Ann has 5 cookies left.
2 from 7 leaves 5. 2 from 7 is 5.

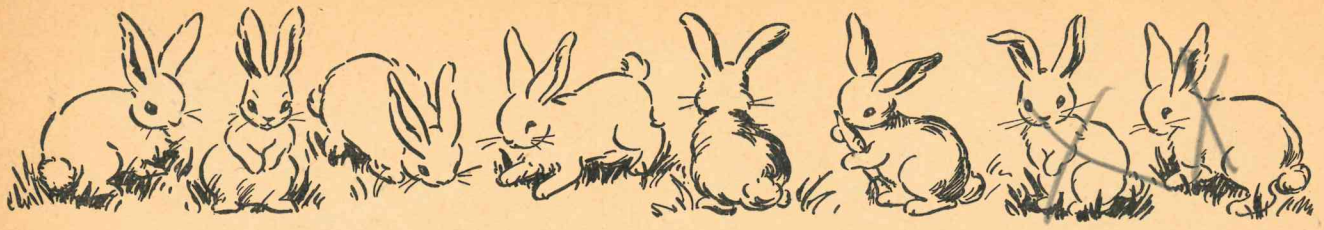
$$\begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array} \qquad \begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array}$$

Subtract:

$$\begin{array}{r} 6 \\ -\,2 \\ \hline 4 \end{array} \quad \begin{array}{r} 3 \\ -\,2 \\ \hline 1 \end{array} \quad \begin{array}{r} 4 \\ -\,2 \\ \hline 2 \end{array} \quad \begin{array}{r} 5 \\ -\,2 \\ \hline 3 \end{array} \quad \begin{array}{r} 8 \\ -\,1 \\ \hline 7 \end{array} \quad \begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array} \quad \begin{array}{r} 6 \\ -\,3 \\ \hline 3 \end{array} \quad \begin{array}{r} 6 \\ -\,2 \\ \hline 4 \end{array}$$

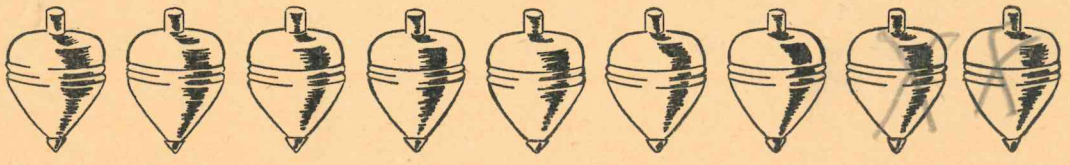
$$\begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array} \quad \begin{array}{r} 5 \\ -\,2 \\ \hline 3 \end{array} \quad \begin{array}{r} 8 \\ -\,4 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array} \quad \begin{array}{r} 9 \\ -\,1 \\ \hline 8 \end{array} \quad \begin{array}{r} 6 \\ -\,2 \\ \hline 4 \end{array} \quad \begin{array}{r} 4 \\ -\,2 \\ \hline 2 \end{array} \quad \begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array}$$

HOW MANY ARE LEFT?



Count the rabbits. There are 8 rabbits.
Take away 2 rabbits. Cross them out.
How many rabbits are left? 6 rabbits
2 rabbits from 8 rabbits leaves 6 rabbits.
2 from 8 leaves 6. 2 from 8 is 6.

$$\begin{array}{r} 8 \\ -\,2 \\ \hline 6 \end{array} \qquad \begin{array}{r} 8 \\ -\,2 \\ \hline 6 \end{array}$$



Count the tops. There are 9 tops.
Take away 2 tops. Cross them out.
How many tops are left? 7 tops
2 tops from 9 tops leaves 7 tops.
2 from 9 leaves 7. 2 from 9 is 7.

$$\begin{array}{r} 9 \\ -\,2 \\ \hline 7 \end{array} \qquad \begin{array}{r} 9 \\ -\,2 \\ \hline 7 \end{array}$$

2 from 3 leaves 1. 2 from 8 is 6.
2 from 5 leaves 3. 2 from 9 is 7.
2 from 4 leaves 2. 2 from 6 is 4.
2 from 7 leaves 5. 3 from 6 is 3.

DOLLS

Count all the dolls. There are 10 dolls.

Take away 2 dolls. Cross them out.

How many dolls are left? 8 dolls

2 dolls from 10 dolls leaves ____ dolls.

2 from 10 leaves 8.

2 from 10 is 8.

$$\begin{array}{r} 10 \\ -\ 2 \\ \hline 8 \end{array} \qquad \begin{array}{r} 10 \\ -\ 2 \\ \hline 8 \end{array}$$

Are 10 dolls more than 2 dolls? Yes No

Are 5 dolls more than 10 dolls? Yes No

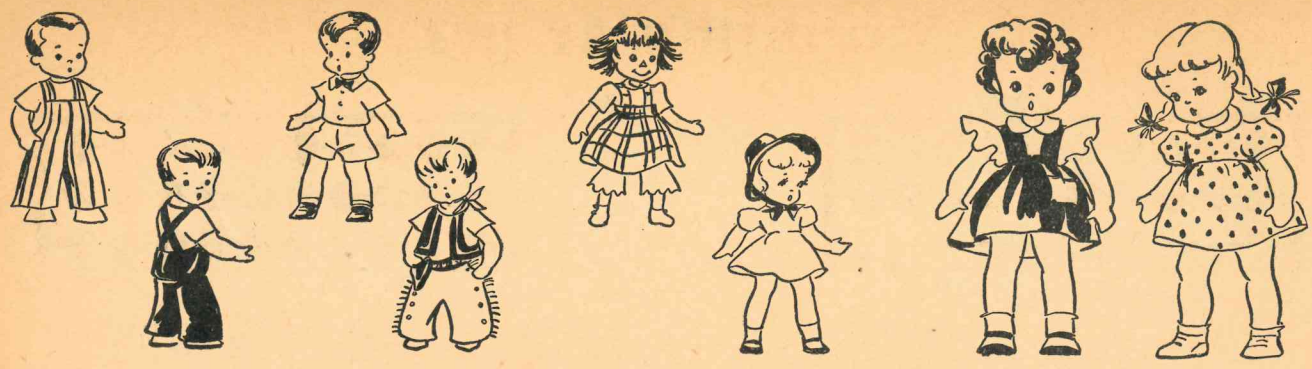
Are 5 dolls more than 3 dolls? Yes No

Subtract:

$$\begin{array}{r} 10 \\ -\ 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 5 \\ -\ 2 \\ \hline 3 \end{array} \quad \begin{array}{r} 8 \\ -\ 1 \\ \hline 7 \end{array} \quad \begin{array}{r} 3 \\ -\ 2 \\ \hline 1 \end{array} \quad \begin{array}{r} 9 \\ -\ 2 \\ \hline 7 \end{array} \quad \begin{array}{r} 6 \\ -\ 3 \\ \hline 3 \end{array} \quad \begin{array}{r} 4 \\ -\ 2 \\ \hline 2 \end{array} \quad \begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 8 \\ -\ 4 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -\ 2 \\ \hline 5 \end{array} \quad \begin{array}{r} 10 \\ -\ 5 \\ \hline 5 \end{array} \quad \begin{array}{r} 6 \\ -\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -\ 1 \\ \hline 6 \end{array} \quad \begin{array}{r} 8 \\ -\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 10 \\ -\ 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 5 \\ -\ 1 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 6 \\ -\ 1 \\ \hline 5 \end{array} \quad \begin{array}{r} 2 \\ -\ 1 \\ \hline 1 \end{array} \quad \begin{array}{r} 8 \\ -\ 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 9 \\ -\ 1 \\ \hline 8 \end{array} \quad \begin{array}{r} 10 \\ -\ 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 10 \\ -\ 5 \\ \hline 5 \end{array} \quad \begin{array}{r} 4 \\ -\ 1 \\ \hline 3 \end{array} \quad \begin{array}{r} 7 \\ -\ 2 \\ \hline 5 \end{array}$$



ANN'S DOLLS

1. These are Ann's dolls. She has 2 large girl dolls and 2 small girl dolls. Ann has __4__ girl dolls.

2 and 2 are __4__.

2. Ann takes her dolls to school. There are 4 boy dolls and 4 girl dolls. Ann takes __8__ dolls to school.

4 and 4 are __8__.

3. There are 8 dolls in all. At school the children put the 2 large dolls to bed. That left __6__ dolls to play with.

2 from 8 leaves __6__.

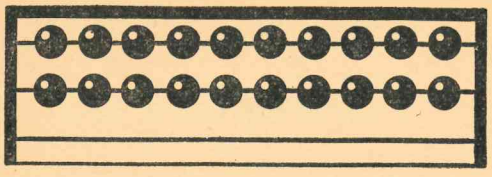
4. Ann has 8 dolls all together. Ann gives Mary the doll with a hat. Then Ann has __7__ dolls left.

1 from 8 leaves __7__.

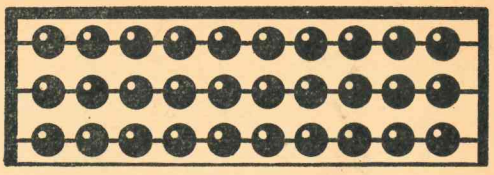
5. Find the answers:

1 + 5 = 6	6 − 2 = 4	1 + 4 = 5	6 − 1 = 5	10 − 5 = 5	7 + 1 = 8	1 + 9 = 10	2 + 3 = 5
2 + 7 = 9	4 + 2 = 6	9 − 1 = 8	5 + 5 = 10	10 − 2 = 8	3 − 2 = 1	5 + 2 = 7	8 − 4 = 4

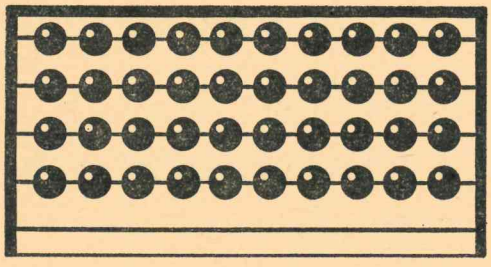
COUNTING BY 10's



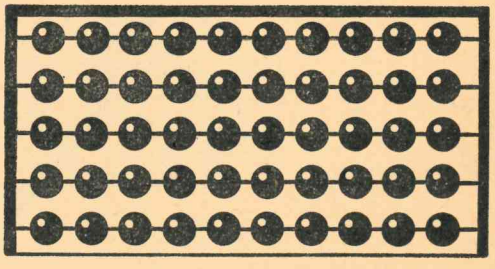
Here are 20 beads.
20 means 2 tens.



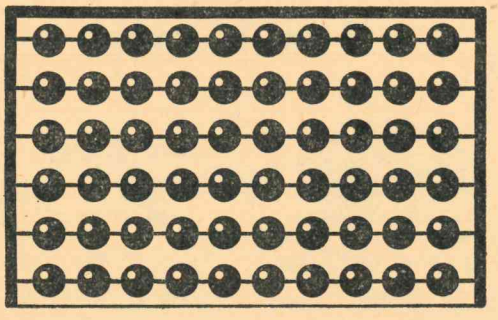
Here are 3 tens.
3 tens make 30.



4 tens make 40.



5 tens make 50.



6 tens make 60.

7 tens make 70.
8 tens make 80.
9 tens make 90.
10 tens make 100.

You can count by 10's to 100 like this:

10 20 30 40 50 60 70 80 90 100

Write the numbers by 10's to 100:

10 _____ 20 _____ 30 _____ 40 _____ 50 _____

60 _____ 70 _____ 80 _____ 90 _____ 100 _____

HIDE AND SEEK

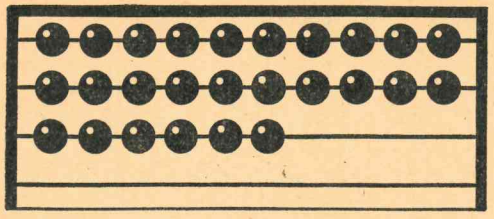
When Joe is "it," he
counts like this:

10, 20,
It's time to run.
30, 40,
Counting is fun.
50, 60,
Hurry, each one.
70, 80,
I'm almost done.
90, 100.
Here I come.

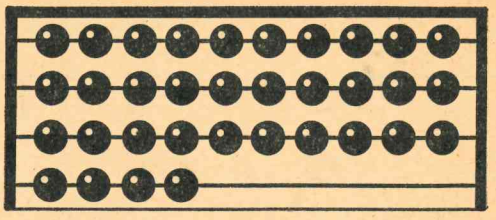
When Mary is "it," she
counts like this:

One, two, three, four,
Run before I count some more.
Five, six, seven, eight,
Hide, or you will be too late.
Nine, ten. Now I'm done.
I will find you, every one.

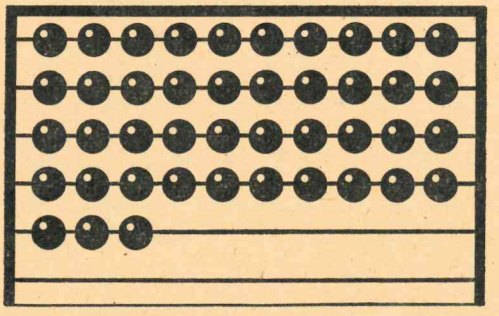
NUMBERS TO 100



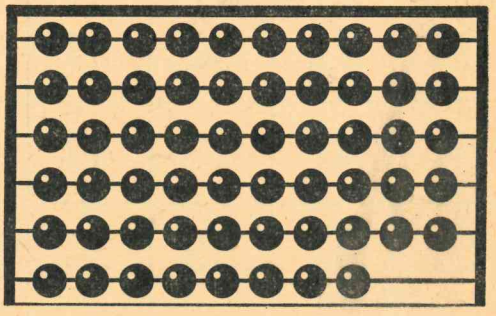
20 and 6 are 26.



30 and 4 are 34.



40 and 3 are 43.



50 and 8 are 58.

30 and 5 are 35.
70 and 4 are 74.
80 and 9 are 89.
10 and 7 are 17.
40 and 4 are 44.

60 and 7 are 67.
90 and 1 are 91.
20 and 2 are 22.
30 and 6 are 36.
10 and 3 are 13.

70 means 7 tens.
50 means 5 tens.
60 means 6 tens.

30 means 3 tens.
90 means 9 tens.
40 means 4 tens.

59 means 5 tens and 9 more.
23 means 2 tens and 3 more.
84 means 8 tens and 4 more.

NUMBERS TO 100

Here are the numbers to 100. Read them:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

35 comes after 34.

64 comes after 63.

28 comes after 27.

80 comes after 79.

53 comes after 52.

76 comes before 77.

37 comes before 38.

59 comes before 60.

24 comes before 25.

99 comes before 100.

TO THE TEACHER. Write on the blackboard the numbers from 1 to 100, arranging them in rows as shown above. Call attention to the fact that there are 10 numbers in each row, hence each row represents 1 ten. Also point out that 10 tens make 100. If the pupils read the numbers in the last vertical column, beginning at the top, they will be counting by 10's.

COUNTING TO 100

Write the numbers that are left out:

21	31	41	51	61	71	81	91
22	32	42	52	62	72	82	92
23	33	43	53	63	73	83	93
24	34	44	54	64	74	84	94
25	35	45	55	65	75	85	95
26	36	46	56	66	76	86	96
27	37	47	57	67	77	87	97
28	38	48	58	68	78	88	98
29	39	49	59	69	79	89	99
30	40	50	60	70	80	90	100

Write the numbers that come before and after each number:

82 83 84	74 75 76	88 89 90
26 27 28	63 64 65	57 58 59
91 92 93	30 31 32	69 70 71
39 40 41	75 76 77	28 29 30
37 38 39	89 90 91	60 61 62

NUMBERS TO 100

On page 94 there are 10 fish.

On page 41 there are 10 clocks.

On page 38 there are 26 bears.

On page 64 there are 2 boys.

On page 96 there are 3 cakes.

On page 59 there are 10 birds.

On page 100 there are 2 pies.

On page 61 there are 7 chickens.

On page 34 there are 4 children.

On page 85 there are 12 cookies.

On page 43 there are 12 pennies.

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53 comes after 52.

21 comes after 20.

68 comes after 67.

37 comes after 36.

60 comes after 59.

92 comes after 91.

35 comes after 34.

85 comes before 86.

39 comes before 40.

44 comes before 45.

99 comes before 100.

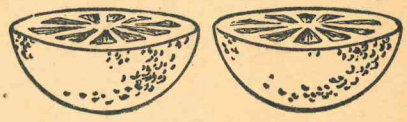
26 comes before 27.

70 comes before 71.

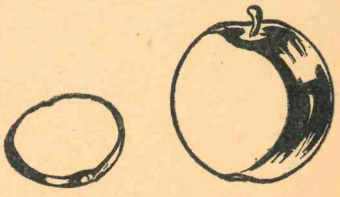
29 comes before 30.

ONE HALF

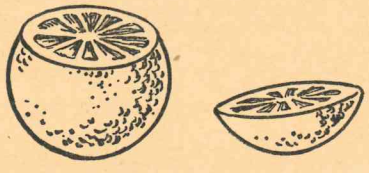
This orange is cut into 2 pieces.
The pieces are both the same size.
Each piece is one half of the orange.
You write one half like this: $\frac{1}{2}$



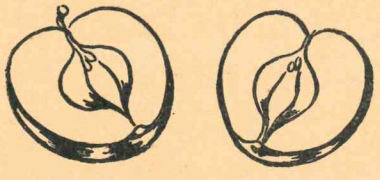
This apple is cut into 2 pieces.
The pieces are not the same size.
The pieces are not halves.
Halves must be the same size.



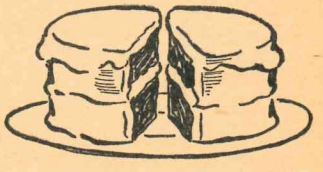
Draw a line under Yes if the pieces are halves. Draw a line under No if the pieces are not halves:



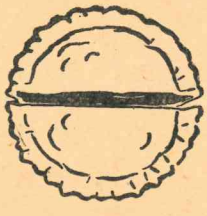
Yes No



Yes No

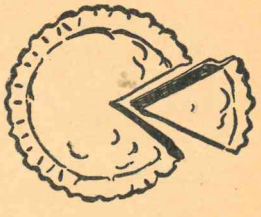


Yes No



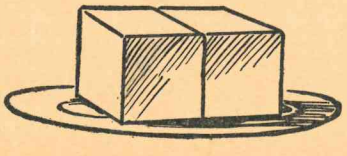
Yes No

Yes No

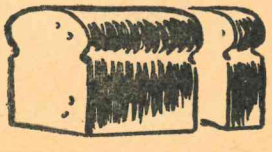


Yes No

Yes No



Yes No



Yes No

PLAYING WITH BOATS

1. I see 3 boys and 2 girls playing with boats. There are __5__ children playing with boats.

2. The boys have 4 boats and the girls have 2 boats. The children have __6__ boats in all.

3. Jim had 2 boats. He gave Mary 1 boat. Then Jim had __1__ boat left.

4. Look again at the 6 boats. Fred takes away 1 boat. Then there are __5__ boats left.

5. 2 boats from 6 boats leaves __4__ boats.

   2 boats from 9 boats leaves __7__ boats.

   8 boats and 2 boats are __6__ boats.

   5 boats and 5 boats are __1__ boats.

TAKE AWAY

I see 4 rabbits. Take away 3 rabbits.
How many rabbits are left? __1__ rabbit
3 rabbits from 4 rabbits leaves __1__ rabbit.
3 from 4 is __1__. 3 from 4 is __1__.

$$\begin{array}{r} 4 \\ -\,3 \\ \hline 1 \end{array}$$

Look at the 4 rabbits. Take away 1 rabbit.
How many rabbits are left? __3__ rabbits
1 from 4 is __3__. 1 from 4 is __3__.

$$\begin{array}{r} 4 \\ -\,1 \\ \hline 3 \end{array}$$

I see 9 cakes. Take way 8 cakes.
How many cakes are left? __1__ cake
8 cakes from 9 cakes leaves __1__ cake.
8 from 9 is __1__. 8 from 9 is __1__.

$$\begin{array}{r} 9 \\ -\,8 \\ \hline 1 \end{array}$$

Take away 1 cake from 9 cakes.
How many cakes are left? __1__ cakes
1 from 9 is __1__. 1 from 9 is __1__.

$$\begin{array}{r} 9 \\ -\,1 \\ \hline 1 \end{array}$$

HOW MANY ARE LEFT?

Here are 5 dogs. The 4 little dogs run away.
How many dogs are left? 1 dog
4 dogs from 5 dogs leaves 1 dog.
4 from 5 is 1. 4 from 5 is 1.

$$\begin{array}{r} 5 \\ -\,4 \\ \hline 1 \end{array}$$

Look at the 5 dogs again. Take away the big dog.
How many dogs are left? 4 dogs
1 from 5 is 4. 1 from 5 is 4.

$$\begin{array}{r} 5 \\ -\,1 \\ \hline 4 \end{array}$$

Here are 8 pennies. Bob spends 7 pennies.
How many pennies has Bob left? 1 penny
7 from 8 is 1. 7 from 8 is 1.

$$\begin{array}{r} 8 \\ -\,7 \\ \hline 1 \end{array}$$

Look at the 8 pennies. Take away 1 penny.
How many pennies are left? 7 pennies
1 from 8 is 7. 1 from 8 is 7.

$$\begin{array}{r} 8 \\ -\,1 \\ \hline 7 \end{array}$$

THE BIRDS FLY AWAY

Ann sees 10 birds. Then 9 birds fly away.
How many birds are left? __1__ bird
9 from 10 is __1__. 9 from 10 is __1__.

$$\begin{array}{r} 10 \\ -\ 9 \\ \hline 1 \end{array}$$

Look at the 10 birds. 1 bird flies away.
How many birds are left? __9__ birds
1 from 10 is __9__. 1 from 10 is __9__.

$$\begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array}$$

---

7 from 8 is __1__. 4 from 5 is __1__.

1 from 5 is __4__. 8 from 9 is __1__.

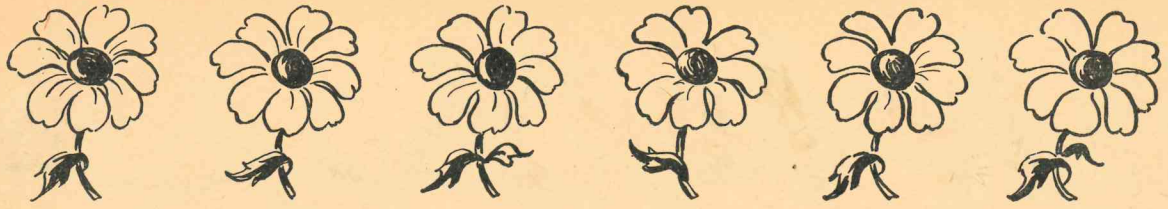
1 from 9 is __8__. 9 from 10 is __1__.

Subtract:

$$\begin{array}{r} 4 \\ -\ 1 \\ \hline 3 \end{array} \quad \begin{array}{r} 5 \\ -\ 1 \\ \hline 4 \end{array} \quad \begin{array}{r} 9 \\ -\ 8 \\ \hline 1 \end{array} \quad \begin{array}{r} 5 \\ -\ 4 \\ \hline 1 \end{array} \quad \begin{array}{r} 4 \\ -\ 3 \\ \hline 1 \end{array} \quad \begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array} \quad \begin{array}{r} 8 \\ -\ 1 \\ \hline 7 \end{array} \quad \begin{array}{r} 10 \\ -\ 9 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 10 \\ -\ 9 \\ \hline 1 \end{array} \quad \begin{array}{r} 9 \\ -\ 1 \\ \hline 8 \end{array} \quad \begin{array}{r} 8 \\ -\ 7 \\ \hline 1 \end{array} \quad \begin{array}{r} 4 \\ -\ 3 \\ \hline 1 \end{array} \quad \begin{array}{r} 9 \\ -\ 8 \\ \hline 1 \end{array} \quad \begin{array}{r} 10 \\ -\ 9 \\ \hline 1 \end{array} \quad \begin{array}{r} 5 \\ -\ 4 \\ \hline 1 \end{array} \quad \begin{array}{r} 5 \\ -\ 1 \\ \hline 4 \end{array}$$

FLOWERS



Betty has 6 flowers. She gives 5 flowers to Ann.
How many flowers has Betty left? __1__ flower
5 from 6 is __1__. 5 from 6 is __1__.

$$\begin{array}{r} 6 \\ -\,5 \\ \hline 1 \end{array}$$

Look at the 6 flowers. Take away 1 flower.
How many flowers are left? __5__ flowers
1 from 6 is __5__. 1 from 6 is __5__.

$$\begin{array}{r} 6 \\ -\,1 \\ \hline 5 \end{array}$$

---

8 and __1__ are 9. 8 from 9 is __1__.
1 and __8__ are 9. 1 from 9 is __8__.

5 and __1__ are 6. 5 from 6 is __1__.
1 and __5__ are 6. 1 from 6 is __5__.

7 and __1__ are 8. 7 from 8 is __1__.
1 and __7__ are 8. 1 from 8 is __7__.

4 and __1__ are 5. 4 from 5 is __1__.
1 and __4__ are 5. 1 from 5 is __4__.

9 and __1__ are 10. 9 from 10 is __1__.
1 and __9__ are 10. 1 from 10 is __9__.

HOW MANY ARE LEFT?

Here are 7 chickens. Take away 6 white chickens.
How many chickens are left? __1__ chicken

6 from 7 is __1__.

6 from 7 is __1__.

$$\begin{array}{r} 7 \\ -\,6 \\ \hline 1 \end{array}$$

Look at the 7 chickens. Take away 1 black chicken.
How many chickens are left? __6__ chickens

1 from 7 is __6__.

1 from 7 is __6__.

$$\begin{array}{r} 7 \\ -\,1 \\ \hline 6 \end{array}$$

Write each story with numbers only. See the first one:

Joe had 6 cents.
He spent 5 cents.
He had __1__ cent left.

$$\begin{array}{r} 6 \\ -\,5 \\ \hline 1 \end{array}$$

Betty had 7 cents.
She lost 1 cent.
She had __6__ cents left.

Ann saw 9 birds.
8 birds flew away.
__1__ bird was left.

Bob has 5 dogs.
He sells 4 dogs.
He has __1__ dog left.

Jim had 5 fish.
He gave Joe 1 fish.
He had __4__ fish left.

Jane had 8 nuts.
She ate 1 nut.
She had __7__ nuts left.

SUBTRACTING

4 from 5 is 1.

1 from 5 is 4.

5	5	5
- 4	- 1	- 4
1	4	1

1 from 10 is 9.

9 from 10 is 1.

10	10	10
- 1	- 9	- 1
9	1	9

6 from 7 is 1.

1 from 7 is 6.

7	7	7
- 6	- 1	- 6
1	6	1

1 from 8 is 7.

7 from 8 is 1.

8	8	8
- 1	- 7	- 1
7	1	7

1 from 6 is 5.

5 from 6 is 1.

6	6	6
- 1	- 5	- 1
5	1	5

1 from 9 is 8.

8 from 9 is 1.

9	9	9
- 1	- 8	- 1
8	1	8

3 from 4 is 1.

5 from 6 is 1.

1 from 4 is 3.

8 from 9 is 1.

1 from 5 is 4.

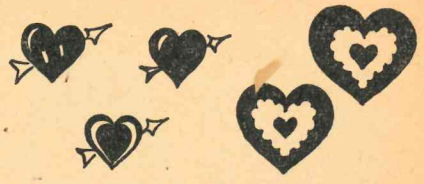
1 from 8 is 7.

6 from 7 is 1.

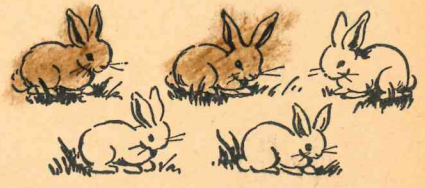
1 from 10 is 9.

NUMBER STORIES

1. Mary made 3 small valentines and 2 large valentines. Mary made __5__ valentines in all.



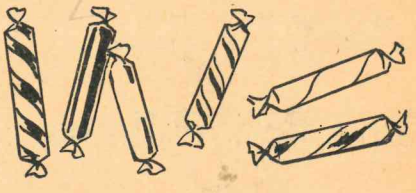
2. Jack had 5 small rabbits. He gave 2 rabbits to Joe. Then Jack had __3__ rabbits left.



3. Ann has 2 white flowers and 4 red flowers. All together Ann has __6__ flowers.

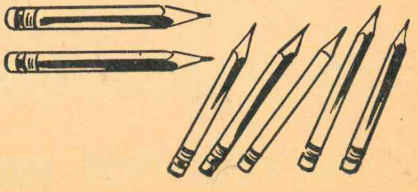
4. Fred has 1 big boat and 2 little boats. Fred has __3__ boats.

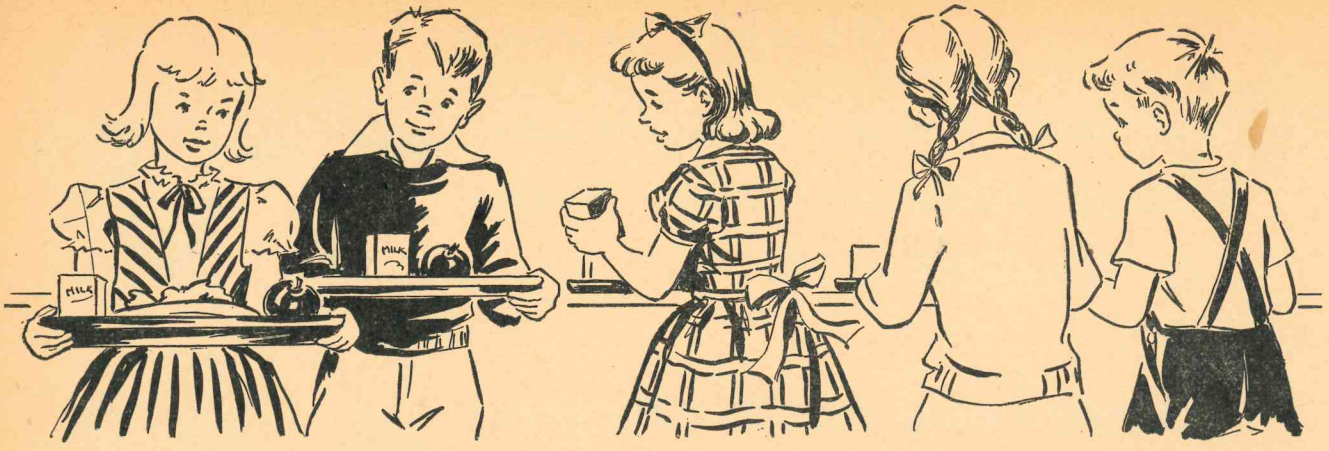
5. Jane had 6 candies. Then she ate 2 candies. How many candies did Jane have left? __4__ candies



6. Joe had 5 cats. He gave away 4 cats. He had __1__ cat left.

7. Betty had 2 pencils. Mother gave her 5 more pencils. Then Betty had __7__ pencils.





Ann Jim Mary Betty Bob

FIRST, SECOND, THIRD

Ann is the first child in line.
Jim is the second child. Mary is the third child.
Betty is the fourth child. Bob is the fifth child.

Put the right word on the line:

The third child is Mary.

The fifth child is Bob.

The first child is Ann.

The last child is Bob.

The second child is Jim.

The fourth child is Betty.

Write your last name here: Falken

Write your first name here: Dale

FIND THE RIGHT ONE

Which child is tallest? A

Which child is shortest? F

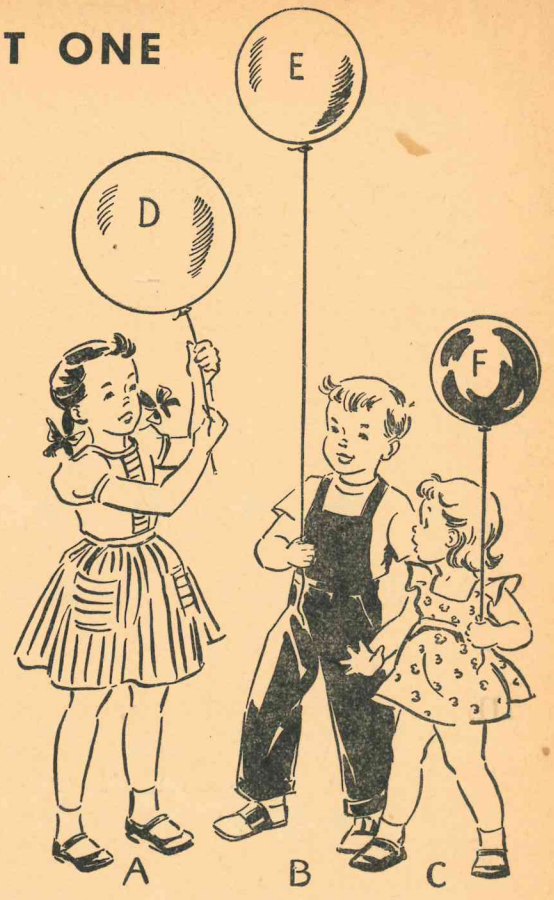
Which balloon is highest? E

Which balloon is lowest? F

Which balloon is largest? E

Which balloon has the longest string? E

Which balloon has the shortest string? D



Draw a line under the largest number in each box:

38 19 <u>52</u>	<u>83</u> 46 79	36 <u>75</u> 28
30 <u>90</u> 70	60 56 <u>65</u>	<u>99</u> 69 96

Draw a line under the smallest number in each box:

<u>15</u> 22 57	83 <u>38</u> 56	79 92 <u>70</u>
<u>39</u> 98 73	91 81 <u>19</u>	22 <u>15</u> 52

TO THE TEACHER. At the top of the page the children should answer each question by writing the letters A, B, C, etc. For example, the tallest child is A. Call attention to the letters A, B, C, printed below the children.

HOW MANY MORE?

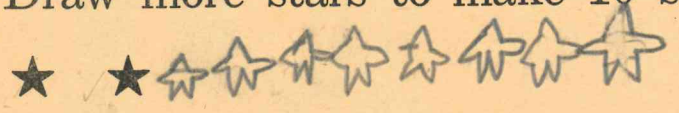
1. Draw more stars to make 9 stars in all.

7 stars and 2 stars are 9 stars.

2. Draw more stars to make 7 stars in all.

5 stars and 2 stars are 7 stars.

3. Draw more stars to make 10 stars in all.



2 stars and 8 stars are 10 stars.

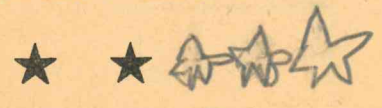
4. Draw more stars to make 6 stars in all.

4 stars and 2 stars are 6 stars.

5. Draw more stars to make 8 stars in all.

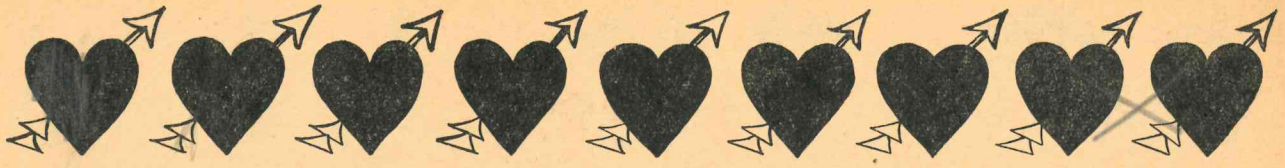
2 stars and 6 stars are 8 stars.

6. Draw more stars to make 5 stars in all.



2 stars and 3 stars are 5 stars.

TAKING AWAY



Tom made 9 valentines. Count them.
He will send 7 valentines away.
How many valentines will he have left? 2
7 from 9 is 2. 7 from 9 is 2.

$$\begin{array}{r} 9 \\ -\,7 \\ \hline 2 \end{array}$$

Look again at the 9 valentines.
Take away 2 valentines. Cross them out.
How many valentines are left? 7 valentines
2 from 9 is 7. 2 from 9 is 7.

$$\begin{array}{r} 9 \\ -\,2 \\ \hline 7 \end{array}$$

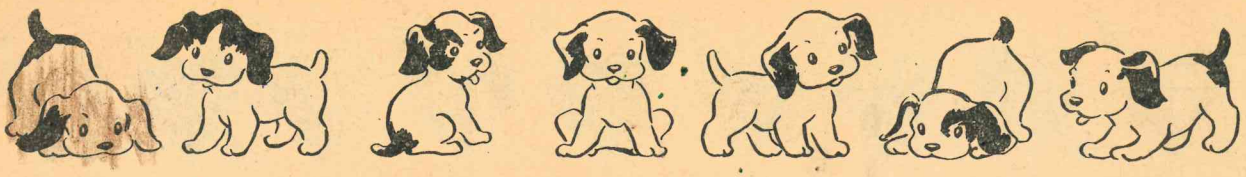
Joe had 8 cents. He spent 6 cents.
How many cents did he have left? 2 cents
6 cents from 8 cents leaves 2 cents.
6 from 8 is 2. 6 from 8 is 2.

$$\begin{array}{r} 8 \\ -\,6 \\ \hline 2 \end{array}$$

Jane had 8 cents. She spent 2 cents.
How many cents did she have left? 6 cents
2 from 8 is 6. 2 from 8 is 6.

$$\begin{array}{r} 8 \\ -\,2 \\ \hline 6 \end{array}$$

SUBTRACTING



Bob has 7 dogs. He sells 5 dogs to Joe.

Then Bob has 2 dogs left.

5 dogs from 7 dogs leaves 2 dogs.

5 from 7 is 2. 5 from 7 is 2.

$$\begin{array}{r} 7 \\ -\,5 \\ \hline 2 \end{array}$$

Look again at the 7 dogs. Take away 2 dogs.

Then there are 5 dogs left.

2 from 7 is 5. 2 from 7 is 5.

$$\begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array}$$

Betty has 10 apples. She gives away 8 apples.

Then Betty has 2 apples left.

8 apples from 10 apples leaves 2 apples.

8 from 10 is 2. 8 from 10 is 2.

$$\begin{array}{r} 10 \\ -\,8 \\ \hline 2 \end{array}$$

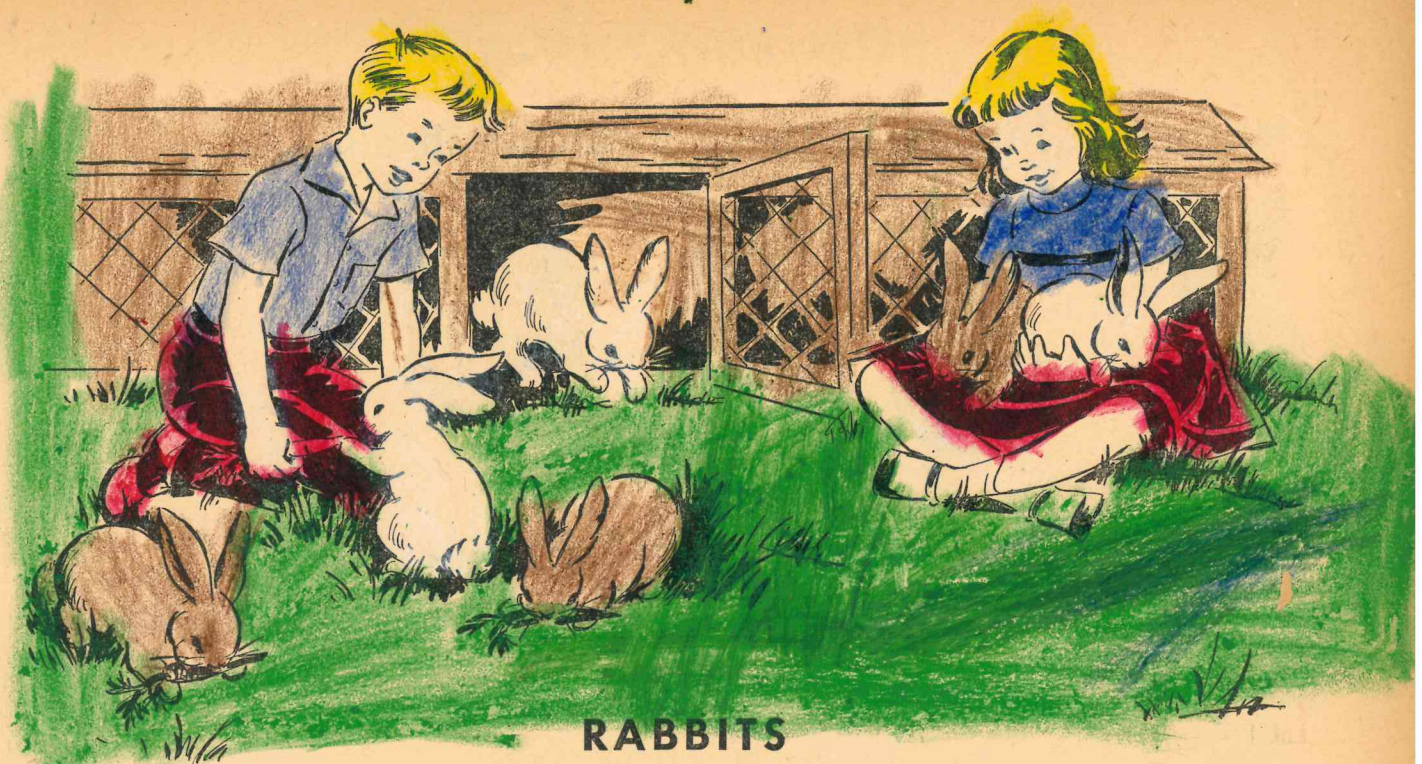
Look at the 10 apples. Take away 2 apples.

Then there are 8 apples left.

2 from 10 is 8. 2 from 10 is 8.

2 from 10 is 8. 8 from 10 is 8.

$$\begin{array}{r} 10 \\ -\,2 \\ \hline 8 \end{array}$$



RABBITS

Joe has __4__ rabbits. Mary has __2__ rabbits.
The children have __6__ rabbits in all.
If Joe's 4 rabbits run away, there will be __2__ rabbits left.

$$\begin{array}{r} 6 \\ -\,4 \\ \hline 2 \end{array}$$

4 rabbits from 6 rabbits leaves __2__ rabbits.
4 from 6 is __2__. 4 from 6 is __2__.

Look again at the 6 rabbits. If 2 rabbits run away, there will be __4__ rabbits left.

$$\begin{array}{r} 6 \\ -\,2 \\ \hline 4 \end{array}$$

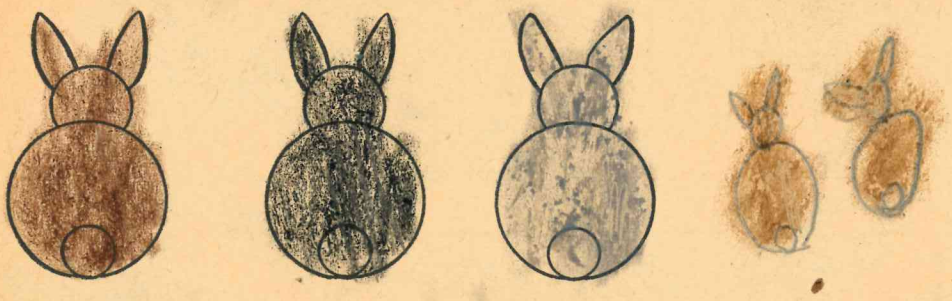
2 rabbits from 6 rabbits leaves __4__ rabbits.
2 from 6 is __4__. 2 from 6 is __4__.

Subtract:

$$\begin{array}{r} 9 \\ -\,2 \\ \hline 7 \end{array} \quad \begin{array}{r} 8 \\ -\,6 \\ \hline 3 \end{array} \quad \begin{array}{r} 10 \\ -\,2 \\ \hline 8 \end{array} \quad \begin{array}{r} 7 \\ -\,5 \\ \hline 3 \end{array} \quad \begin{array}{r} 9 \\ -\,7 \\ \hline 2 \end{array} \quad \begin{array}{r} 6 \\ -\,4 \\ \hline 2 \end{array} \quad \begin{array}{r} 7 \\ -\,2 \\ \hline 5 \end{array} \quad \begin{array}{r} 10 \\ -\,8 \\ \hline 2 \end{array}$$

HOW MANY MORE?

Draw more rabbits to make 5 rabbits in all.



3 rabbits and __2__ rabbits are 5 rabbits.

3 rabbits from 5 rabbits leaves __2__ rabbits.

3 from 5 is __2__. 3 from 5 is __2__.

$$\begin{array}{r} 5 \\ -\,3 \\ \hline 2 \end{array}$$

2 rabbits and __3__ rabbits are 5 rabbits.

2 rabbits from 5 rabbits leaves __3__ rabbits.

2 from 5 is __3__. 2 from 5 is __3__.

$$\begin{array}{r} 5 \\ -\,2 \\ \hline 3 \end{array}$$

---

4 and __2__ are 6.

4 from 6 is __2__.

6 and __2__ are 8.

6 from 8 is __2__.

3 and __3__ are 6.

3 from 6 is __3__.

7 and __2__ are 9.

7 from 9 is __2__.

8 and __2__ are 10.

8 from 10 is __2__.

4 and __4__ are 8.

4 from 8 is __4__.

5 and __2__ are 7.

5 from 7 is __2__.

5 and __5__ are 10.

5 from 10 is __5__.

REVIEW

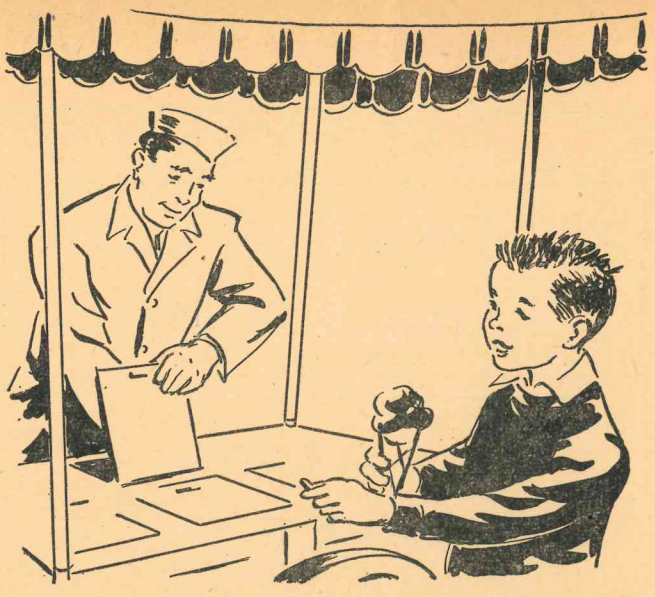
●●●●●●● ●● 7 from 9 is 2. 2 from 9 is 7.	●●●●●●●● ●● 8 from 10 is 2. 2 from 10 is 8.
★★★★★★ ★★ 6 from 8 is 2. 2 from 8 is 6.	★★ ★★★★★ 2 from 7 is 5. 5 from 7 is 2.
◆◆◆◆ ◆◆ 4 from 6 is 2. 2 from 6 is 4.	◆◆◆ ◆◆ 3 from 5 is 2. 2 from 5 is 3.

4 from 6 is 2.	2 from 6 is 4.
2 from 9 is 7.	7 from 9 is 2.
3 from 5 is 2.	2 from 5 is 3.
2 from 8 is 6.	6 from 8 is 2.
8 from 10 is 2.	2 from 10 is 8.

Subtract:

7 − 5 2	10 − 8 2	5 − 3 2	9 − 2 7	6 − 4 2	8 − 6 2	10 − 2 8	9 − 7 2

IS THE CHANGE RIGHT?



1. Bob buys ice cream for 5 cents. He gives the man 10 cents. The man gives Bob 5 cents in change. Is 5 cents the right change? Answer by writing Yes or No on the line. Yes

2. Mary buys candy for 3 cents. She gives the man 5 cents. The man gives her this change:

Is the change right? Yes

3. Tom buys an apple for 2 cents. He gives the man a nickel. A nickel is the same as 5 cents. Tom gets back this change:

Is the change right? Yes

2¢ from 5¢ is 3 ¢.

4. Jim buys a pencil for 2 cents. He gives the man a dime. A dime is 10 cents. Jim gets this change:

Is the change right? Yes

5. Ann buys a ball for 8 cents. She gives the man a dime. A dime is the same as 10 cents. Ann gets back this change:

Is the change right? Yes

8¢ from 10¢ is 2 ¢.

THE CALENDAR

Make a calendar for this month:

October						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY

This month has _____ days in all.

Look at the top of the calendar. You see the names of the days of the week. Read them.

There are _____ days in a week.

Children go to school _____ days a week.

Is Monday the first day of the school week? Yes No

Today is _____

(The pupil should write the date on this line.)

TO THE TEACHER. Have the children write the name of the month and year in the space at the top of the calendar. The calendar above has 5 rows for numbers. Sometimes 6 rows are needed but the sixth row can be avoided by putting 2 numbers in each box at the beginning of the fifth row. Show the pupils how this is done on a real calendar.

MORE AND LESS

Here are Mary's dolls.
Mary has 5 dolls.

Here are Ann's dolls.
Ann has 2 dolls.

Mary has 3 more dolls than Ann.
5 dolls are 3 more than 2 dolls.
2 dolls are 3 less than 5 dolls.

Here are Fred's pennies.
Fred has 6 pennies.

Here are Joe's pennies.
Joe has 4 pennies.

Fred has 2 more pennies than Joe.
6 pennies are 2 more than 4 pennies.
4 pennies are 2 less than 6 pennies.

Here are Betty's flowers.
Betty has 7 flowers.

Here are Mary's flowers.
Mary has 5 flowers.

Betty has 2 more flowers than Mary.
7 flowers are 2 more than 5 flowers.
5 flowers are 2 less than 7 flowers.

ADDING AND SUBTRACTING

Add. Draw dots if you need to:

3 1 4	4 4 8	7 1 8	2 3 5	1 5 6	8 1 9	2 5 7	1 4 5
2 8 10	5 1 6	2 6 8	1 2 3	7 2 9	4 2 6	1 9 10	3 3 6
5 2 7	2 7 9	1 7 8	2 2 4	4 1 5	5 5 10	6 2 8	1 6 7
1 3 4	9 1 10	3 2 5	6 1 7	1 8 9	8 2 10	1 1 2	2 4 6

Subtract. Draw dots if you need to:

8 - 1 7	5 - 4 1	3 - 1 2	5 - 2 3	4 - 3 1	9 - 1 8	10 - 5 5	6 - 4 2
6 - 3 3	7 - 2 5	10 - 9 1	7 - 6 1	8 - 2 6	9 - 7 2	4 - 1 3	6 - 5 1
5 - 1 4	8 - 4 4	3 - 2 1	8 - 7 1	9 - 2 7	10 - 8 2	10 - 1 9	6 - 2 4
9 - 8 1	5 - 3 2	7 - 1 6	10 - 2 8	4 - 2 2	6 - 1 5	7 - 5 2	8 - 6 2

APPLES

 and  are 6 apples.

 and  are 7 apples.

3 apples and 3 apples are 6 apples.

3 apples and 4 apples are 7 apples.

3 and 3 are 6. 3 and 4 are 7.

$$\begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array} \qquad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array}$$

You see that 3 and 4 make 1 more than 3 and 3.

3 and 3 are 6, so 3 and 4 are 7.

3 and 3 are 6. 3 and 4 are 7.

$$\begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array} \qquad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array}$$

3 and 4 are 7. 4 and 3 are 7.

3 and 4 are 7. 4 and 3 are 7.

3 and 4 are 7. 4 and 3 are 7.

$$\begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \qquad \begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array}$$

Add the numbers:

$$\begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array} \quad \begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 2 \\ 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 2 \\ 3 \\ \hline 5 \end{array} \quad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 1 \\ 9 \\ \hline 10 \end{array} \quad \begin{array}{r} 7 \\ 2 \\ \hline 9 \end{array} \quad \begin{array}{r} 6 \\ 1 \\ \hline 7 \end{array} \quad \begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 1 \\ 5 \\ \hline 6 \end{array} \quad \begin{array}{r} 6 \\ 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 4 \\ 4 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 2 \\ 5 \\ \hline 7 \end{array} \quad \begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 2 \\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array} \quad \begin{array}{r} 5 \\ 5 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 8 \\ \hline 10 \end{array} \quad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 7 \\ 1 \\ \hline 8 \end{array}$$

FLOWERS

 and  are 9 flowers.

 and  are 9 flowers.

4 flowers and 4 flowers are 8 flowers.

4 flowers and 5 flowers are 9 flowers.

4 and 4 are 8. 4 and 5 are 9.

4	4
4	5
8	9

You see that 4 and 5 make 1 more than 4 and 4.

4 and 4 are 8, so 4 and 5 are 9.

4 and 4 are 8. 4 and 5 are 9.

4	4
4	5
8	9

4 and 5 are 9. 5 and 4 are 9.

4 and 5 are 9. 5 and 4 are 9.

4 and 5 are 9. 5 and 4 are 9.

4	5
5	4
9	9

Add the numbers:

4	4	5	3	4	5	4	2
4	5	4	4	3	4	5	7
8	9	9	7	7	9	9	9
4	5	2	4	3	3	2	5
3	5	8	5	3	4	6	2
7	10	10	9	6	7	8	7
2	7	5	2	6	4	8	2
4	2	4	8	2	4	2	3
6	9	9	10	8	8	10	5

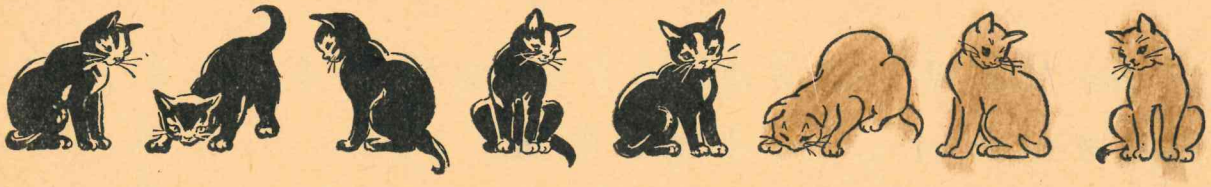
ADDING

Here are 5 black cats and 2 white cats.

5 cats and 2 cats are __7__ cats.

5 and 2 are __7__. 5 and 2 are __7__.

$$\begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array} \qquad \begin{array}{r} 5 \\ 2 \\ \hline 7 \end{array}$$



Now I see 5 black cats and 3 white cats.

This time there is 1 more white cat.

5 cats and 3 cats are __8__ cats.

5 and 3 make 1 more than 5 and 2.

5 and 2 are __8__, so 5 and 3 are __8__.

$$\begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array} \qquad \begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array}$$

5 and 3 are __8__. 3 and 5 are __8__.

5 and 3 are __8__. 3 and 5 are __8__.

5 and 3 are __8__. 3 and 5 are __8__.

$$\begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array} \qquad \begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array}$$

Add the numbers:

$$\begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \quad \begin{array}{r} 5 \\ 4 \\ \hline 9 \end{array} \quad \begin{array}{r} 3 \\ 3 \\ \hline 6 \end{array} \quad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array} \quad \begin{array}{r} 4 \\ 5 \\ \hline 9 \end{array} \quad \begin{array}{r} 4 \\ 4 \\ \hline 8 \end{array}$$

HOW MANY?

3 and 4 are 7.

4 and 3 are 7.

3	4	3
4	3	4
7	7	7

4 and 5 are 9.

5 and 4 are 9.

4	5	4
5	4	5
9	9	9

3 and 5 are 8.

5 and 3 are 8.

3	5	3
5	3	5
8	8	8

2 and 7 are 9.

7 and 2 are 9.

2	7	2
7	2	7
9	9	9

6 and 2 are 8.

2 and 6 are 8.

6	2	6
2	6	2
8	8	8

8 and 2 are 10.

2 and 8 are 10.

8	2	8
2	8	2
10	10	10

3 and 4 are 7.

5 and 3 are 8.

4 and 5 are 9.

3 and 5 are 8.

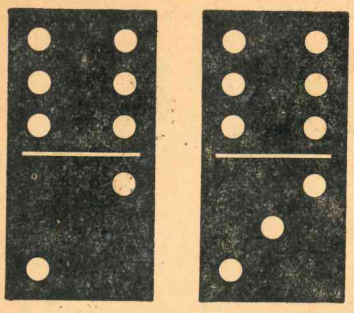
5 and 5 are 10.

4 and 3 are 7.

5 and 4 are 9.

4 and 4 are 8.

MORE ADDING



Bob says, "I know that 6 and 2 are 8, so 6 and 3 must be 9."

6 and 2 are 8.

6 and 3 are 9.

$$\begin{array}{r} 6 \\ 2 \\ \hline 8 \end{array} \qquad \begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array}$$

6 and 2 are 8. 6 and 3 are 9.

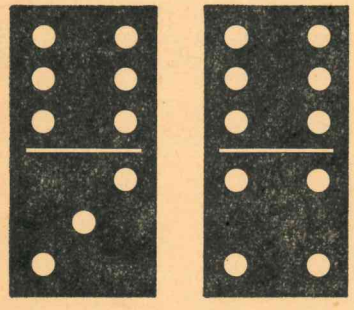
6 and 2 are 8. 6 and 3 are 9.

6 and 3 are 9. 3 and 6 are 9.

6 and 3 are 9. 3 and 6 are 9.

3 and 6 are 9. 3 and 6 are 9.

$$\begin{array}{r} 3 \\ 6 \\ \hline 9 \end{array} \qquad \begin{array}{r} 3 \\ 6 \\ \hline 9 \end{array}$$



Jack knows that 6 and 3 are 9, so 6 and 4 must be 10.

6 and 3 are 9.

6 and 4 are 10.

$$\begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array} \qquad \begin{array}{r} 6 \\ 4 \\ \hline 10 \end{array}$$

6 and 3 are 9. 6 and 4 are 10.

6 and 4 are 10, so 4 and 6 are 10.

6 and 4 are 10. 4 and 6 are 10.

4 and 6 are 10. 4 and 6 are 10.

$$\begin{array}{r} 4 \\ 6 \\ \hline 10 \end{array} \qquad \begin{array}{r} 4 \\ 6 \\ \hline 10 \end{array}$$

THE DOG SHOW

Bob went to the school dog show.

Bob saw 7 small dogs and 3 large dogs.

Bob saw 10 dogs in all.

7 dogs and 3 dogs are 10 dogs.

7 and 3 are 10.

7 and 3 are 10.

$$\begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array} \qquad \begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array}$$

7 and 3 are 10, so 3 and 7 are 10.

3 and 7 are 10.

3 and 7 are 10.

3 and 7 are 10.

3 and 7 are 10.

$$\begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array} \qquad \begin{array}{r} 3 \\ 7 \\ \hline 10 \end{array}$$

Add the numbers:

$$\begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 7 \\ \hline 9 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 10 \end{array} \quad \begin{array}{r} 4 \\ 6 \\ \hline 10 \end{array} \quad \begin{array}{r} 7 \\ 2 \\ \hline 9 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 10 \end{array} \quad \begin{array}{r} 6 \\ 4 \\ \hline 10 \end{array} \quad \begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 4 \\ 5 \\ \hline 9 \end{array} \quad \begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array} \quad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 10 \end{array} \quad \begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 9 \end{array} \quad \begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array} \quad \begin{array}{r} 5 \\ 4 \\ \hline 9 \end{array}$$

HOW MANY CAN YOU DO?

1. Mary had 3 cents. Mother gave her 4 cents.
   Then Mary had __7__ cents.
   3 cents and 4 cents are __7__ cents.

$$\begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array}$$

2. Joe had 6 rabbits. Tom gave him 4 rabbits.
   Then Joe had __10__ rabbits.
   6 rabbits and 4 rabbits are __10__ rabbits.

$$\begin{array}{r} 6 \\ 4 \\ \hline 10 \end{array}$$

3. Ann spent 3 cents for a pencil and 7 cents for ice cream. Ann spent __10__ cents in all.
   3 cents and 7 cents are __10__ cents.

$$\begin{array}{r} 3 \\ 7 \\ \hline 10 \end{array}$$

4. Fred read 6 books. Then he read 3 more books. Fred read __9__ books in all.
   6 books and 3 books are __9__ books.

$$\begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array}$$

5. Add these numbers:

$$\begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array} \quad \begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array} \quad \begin{array}{r} 4 \\ 6 \\ \hline 10 \end{array} \quad \begin{array}{r} 5 \\ 4 \\ \hline 9 \end{array} \quad \begin{array}{r} 8 \\ 2 \\ \hline 10 \end{array} \quad \begin{array}{r} 3 \\ 7 \\ \hline 10 \end{array} \quad \begin{array}{r} 6 \\ 4 \\ \hline 10 \end{array} \quad \begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 4 \\ 5 \\ \hline 9 \end{array} \quad \begin{array}{r} 7 \\ 3 \\ \hline 10 \end{array} \quad \begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array} \quad \begin{array}{r} 3 \\ 6 \\ \hline 9 \end{array} \quad \begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array} \quad \begin{array}{r} 4 \\ 6 \\ \hline 10 \end{array} \quad \begin{array}{r} 2 \\ 7 \\ \hline 9 \end{array}$$

FIND THE SCORE

Each child throws 2 rings. If a ring falls on the floor it counts zero. Zero means nothing. You write zero like this: 0

Betty throws a ring on 4. It counts 4. The other ring falls on the floor. It counts 0.
4 and 0 make 4, so Betty's score is 4.
4 and 0 are __4__. 0 and 4 are __4__.

4	0
0	4
4	4

Fred throws 2 rings. They both fall on the floor. Each ring counts 0.
0 and 0 make 0, so Fred's score is 0.
0 and 0 are __0__. 0 and 0 are _0__.

0	0
0	0
0	0

Write each child's score:

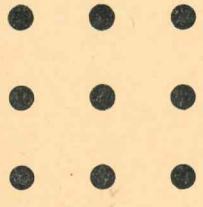
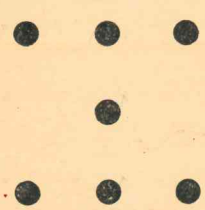
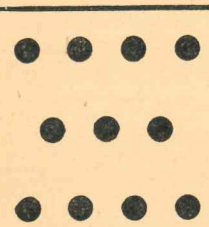
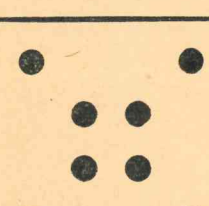
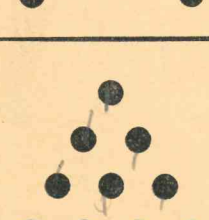
Joe	Jim	Fred	Ann	Mary	Jane	Bob
0	3	2	2	0	1	0
6	0	6	0	5	0	0
6	3	8	2	5	1	0

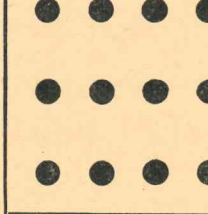
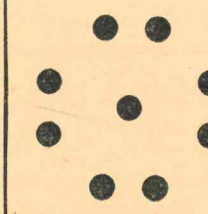
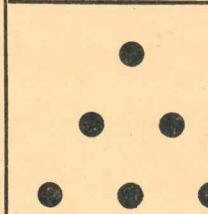
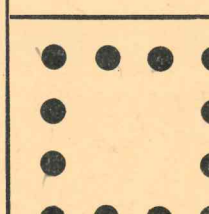
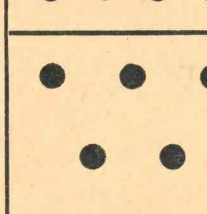
NUMBER NAMES TO TWELVE

Read these number names:

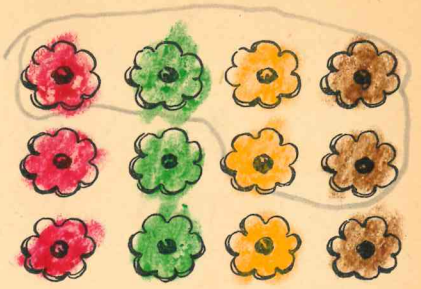
1	2	3	4	5	6
one	two	three	four	five	six
7	**8**	**9**	**10**	**11**	**12**
seven	eight	nine	ten	eleven	twelve

Draw a line under the right word:

	four three nine
	five nine seven
	eleven eight twelve
	ten eight four
	two six ten

	three twelve seven
	seven eleven nine
	nine four six
	twelve four eight
	seven eight three

DOZEN AND POUND



1. Mother gave Ann a dozen cookies for the school party. Count the cookies in a dozen. There are 12 cookies in a dozen.

   12 things make 1 dozen.

2. Draw a line around 6 of Ann's cookies. 6 cookies make a half dozen cookies.

   6 things make a half dozen.

3. Draw a line under each thing you can buy by the dozen:

   eggs butter pencils oranges flowers

4. Jim bought a box of candy for the school party. The candy weighed 1 pound.

5. Jim weighs 51 pounds. How many pounds do you weigh? _____ pounds

6. Draw a line under each thing you can buy by the pound:

   butter pencils candy
   chicken flowers books

How many cents do these dimes make? To find out, count the dimes by 10's:

8 dimes make 80 cents.

5 dimes make 50 cents.

4 dimes make 40 cents.

7 dimes make 70 cents.

3 dimes and 2 cents are 32 cents.

7 dimes and 5 cents are 75 cents.

6 dimes and 3 cents are 63 cents.

5 dimes and 0 cents are 50 cents.

9 dimes and 8 cents are 98 cents.

25 cents is the same as ____ dimes and ____ cents.

72 cents is the same as ____ dimes and ____ cents.

84 cents is the same as ____ dimes and ____ cents.

49 cents is the same as ____ dimes and ____ cents.

17 cents is the same as ____ dime and ____ cents.

83 comes after 82.

37 comes before 38.

57 comes after 56.

64 comes before 65.

90 comes after 89.

71 comes before 70.

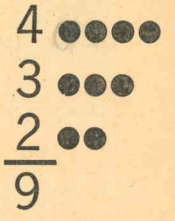
45 comes after 44.

39 comes before 40.

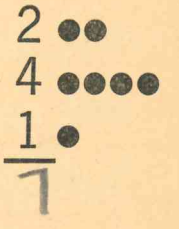
ADDING THREE NUMBERS

1. Jim had 4¢. Mother gave him 3¢ today. Then Ann gave him 2¢ more. How many cents has Jim now?

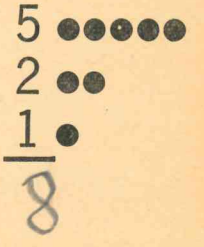
   You can find out by adding like this: "4 and 3 are 7. 7 and 2 more are 9." Jim has 9¢ in all.



2. Mary has 2 dogs, 4 rabbits, and 1 cat. How many pets has she in all? Add to find out. Mary has 7 pets.



3. Joe spends 5¢ for ice cream, 2¢ for an apple, and 1¢ for candy. Joe spends 8 ¢ for all these things.

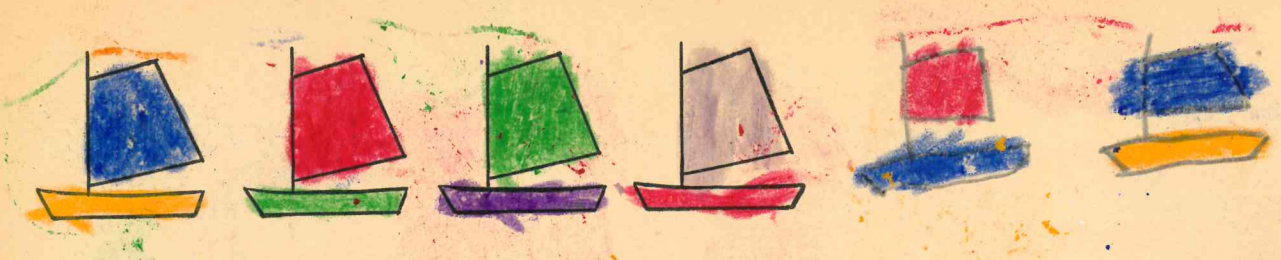


4. Add. Draw dots if you need them:

3	2	3	6	2	3	1
1	1	5	1	4	1	1
3	6	2	1	4	2	7
7	9	10	8	10	6	9
3	4	2	6	1	2	5
4	5	2	3	5	1	1
2	1	2	1	4	5	4
9	10	6	10	10	8	10

TO THE TEACHER. In this book column addition is limited to exercises having a sum of 10 or less.

HOW MANY MORE ARE NEEDED?



Joe wants to draw 6 boats. He has made 4 of them. He needs to draw 2 more boats. Draw them.

4 boats and 2 boats are 6 boats.

Mary wants to make a hat for each of her 7 dolls. She has made 3 hats. Mary needs to make 10 more hats.

3 hats and 10 hats are 7 hats.

Betty needs 8 apples for her party. She has 5 apples now. She needs 13 more apples.

5 apples and 13 apples are 8 apples.

4 and 5 are 9.

5 and 3 are 8.

4 and 3 are 7.

6 and 3 are 9.

4 and 4 are 8.

3 and 7 are 10.

6 and 13 are 10.

5 and 4 are 9.

3 and 5 are 8.

3 and 4 are 7.

3 and 6 are 9.

5 and 5 are 10.

7 and 3 are 10.

4 and 6 are 10.

CLOWNS

I see 4 little clowns and 3 big clowns.

4 clowns and 3 clowns are 7 clowns.

4 and 3 are 7. 3 and 4 are 7.

$$\begin{array}{r} 4 \\ 3 \\ \hline 7 \end{array} \qquad \begin{array}{r} 3 \\ 4 \\ \hline 7 \end{array}$$

Look at the 7 clowns. Take away the 3 big clowns. Cover them up.

How many clowns are left? 7 clowns

3 from 7 is 7. 3 from 7 is 7.

$$\begin{array}{r} 7 \\ -3 \\ \hline 7 \end{array} \qquad \begin{array}{r} 7 \\ -3 \\ \hline 7 \end{array}$$

Look again at the 7 clowns. Take away the 4 little clowns. Cover them up.

How many clowns are left? _____ clowns

4 from 7 is _____. 4 from 7 is _____.

$$\begin{array}{r} 7 \\ -4 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ -4 \\ \hline \end{array}$$

Subtract these numbers:

$$\begin{array}{r} 7 \\ -3 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -4 \\ \hline 3 \end{array} \quad \begin{array}{r} 7 \\ -1 \\ \hline 6 \end{array} \quad \begin{array}{r} 7 \\ -3 \\ \hline 4 \end{array} \quad \begin{array}{r} 7 \\ -6 \\ \hline 1 \end{array} \quad \begin{array}{r} 7 \\ -4 \\ \hline 3 \end{array} \quad \begin{array}{r} 7 \\ -2 \\ \hline 5 \end{array} \quad \begin{array}{r} 7 \\ -5 \\ \hline 2 \end{array}$$

DUCKS

Here are 3 black ducks and 6 white ducks.

3 ducks and 6 ducks are 9 ducks.

6 ducks and 3 ducks are 9 ducks.

3 and 6 are 9.

6 and 3 are 9.

$$\begin{array}{r} 3 \\ 6 \\ \hline 9 \end{array} \qquad \begin{array}{r} 6 \\ 3 \\ \hline 9 \end{array}$$

Look at the 9 ducks. There are 3 black ducks.
The rest of the ducks are white.

How many white ducks are there? 6 ducks

3 from 9 is 6.

3 from 9 is 6.

$$\begin{array}{r} 9 \\ -\,3 \\ \hline 6 \end{array} \qquad \begin{array}{r} 9 \\ -\,3 \\ \hline 6 \end{array}$$

Joe has 9 ducks. He gives 6 ducks to Ann.
He gives the rest of them to Bob.

Joe gives 3 ducks to Bob.

6 from 9 is 3.

3 from 9 is 6.

6 from 9 is 3.

6 from 9 is 3.

$$\begin{array}{r} 9 \\ -\,6 \\ \hline 3 \end{array} \qquad \begin{array}{r} 9 \\ -\,6 \\ \hline 3 \end{array}$$

Subtract the numbers:

$$\begin{array}{r} 9 \\ -\,6 \\ \hline 3 \end{array} \quad \begin{array}{r} 9 \\ -\,3 \\ \hline 6 \end{array} \quad \begin{array}{r} 9 \\ -\,6 \\ \hline 3 \end{array} \quad \begin{array}{r} 9 \\ -\,3 \\ \hline 6 \end{array} \quad \begin{array}{r} 9 \\ -\,2 \\ \hline 7 \end{array} \quad \begin{array}{r} 9 \\ -\,7 \\ \hline 2 \end{array} \quad \begin{array}{r} 9 \\ -\,8 \\ \hline 1 \end{array} \quad \begin{array}{r} 9 \\ -\,1 \\ \hline 8 \end{array}$$

BOYS

I see 5 tall boys and 4 short boys.

5 boys and 4 boys are 9 boys.

5 and 4 are 9. 4 and 5 are 9.

$$\begin{array}{r} 5 \\ 4 \\ \hline 9 \end{array} \qquad \begin{array}{r} 4 \\ 5 \\ \hline 9 \end{array}$$

There are 9 boys. 4 of them are short boys.
The rest of them are tall boys.

How many tall boys are there? 5 boys

4 from 9 is 5. 4 from 9 is 5.

$$\begin{array}{r} 9 \\ -\,4 \\ \hline 5 \end{array} \qquad \begin{array}{r} 9 \\ -\,4 \\ \hline 5 \end{array}$$

Look at the 9 boys. 5 of them have hats.
The rest of the boys have no hats.

How many boys have no hats? 4 boys

5 from 9 is 4. 5 from 9 is 4.

$$\begin{array}{r} 9 \\ -\,5 \\ \hline 4 \end{array} \qquad \begin{array}{r} 9 \\ -\,5 \\ \hline 4 \end{array}$$

Subtract these numbers:

$$\begin{array}{r} 9 \\ -\,4 \\ \hline 5 \end{array} \quad \begin{array}{r} 9 \\ -\,5 \\ \hline 4 \end{array} \quad \begin{array}{r} 9 \\ -\,4 \\ \hline 5 \end{array} \quad \begin{array}{r} 9 \\ -\,5 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ -\,3 \\ \hline 6 \end{array} \quad \begin{array}{r} 9 \\ -\,6 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ -\,7 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ -\,2 \\ \hline 7 \end{array}$$

NUMBER STORIES

1. Ann has 9 dolls. 4 dolls are big. The other dolls are little. How many dolls are little? __4__ dolls

4 from 9 is __5__.

2. There are 7 children playing. 3 of them are girls. The others are boys. There are __4__ boys playing.

3 from 7 is __4__.

3. Jim has 6 oranges. He has 4 large oranges. The others are small. How many small oranges are there? __2__ oranges.

4 from 6 is __2__.

4. Fred has 5 toy airplanes. 1 airplane is large. The others are small. Fred has __4__ small airplanes.

1 from 5 is __4__.

5. Mother has 7 apples. She has 5 yellow apples. The other apples are red. Mother has __2__ red apples.

5 from 7 is __2__.

6. Betty saw 9 horses. There were 3 white horses. The other horses were black. There were __6__ black horses.

3 from 9 is __6__.

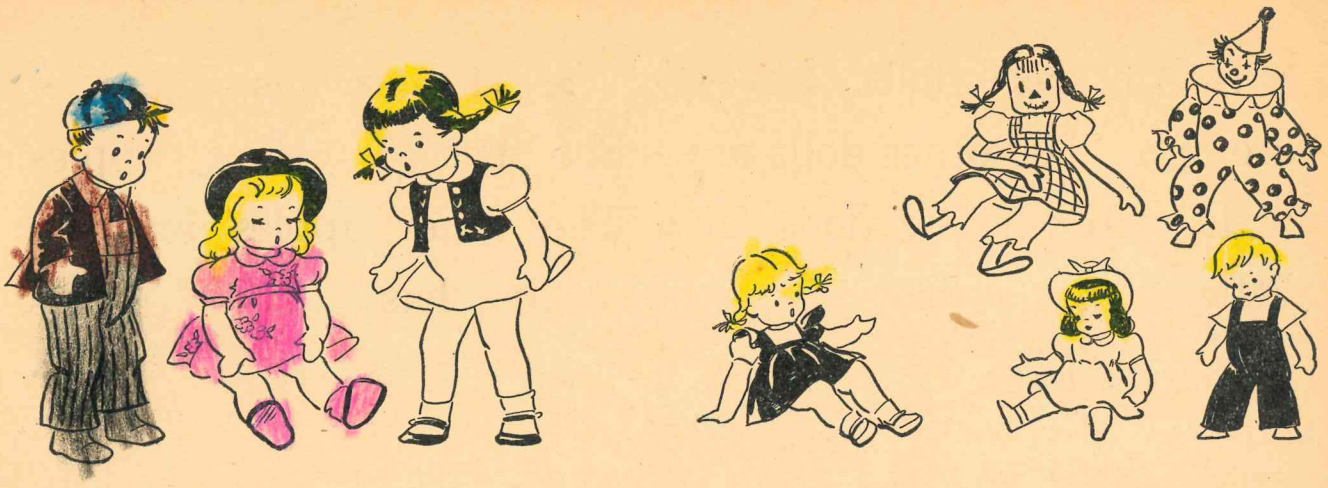
7. Mother had 10 pennies. She gave 5 pennies to Mary. She gave the rest to Joe. Mother gave __5__ pennies to Joe.

5 from 10 is __5__.

8. Jane has 4 cats. She has 1 large black cat. The other cats are white. Jane has __3__ white cats.

1 from 4 is __3__.

DOLLS



I see 3 large dolls and 5 small dolls.

3 dolls and 5 dolls are 8 dolls.

3 and 5 are 8. 5 and 3 are 8.

$$\begin{array}{r} 3 \\ 5 \\ \hline 8 \end{array} \qquad \begin{array}{r} 5 \\ 3 \\ \hline 8 \end{array}$$

Look at the 8 dolls. Take away 3 dolls.

How many dolls are left? 5 dolls

3 dolls from 8 dolls leaves 5 dolls.

3 from 8 is 5. 3 from 8 is 5.

$$\begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array} \qquad \begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array}$$

Look at the 8 dolls. Take away 5 dolls.

How many dolls are left? 3 dolls

5 dolls from 8 dolls leaves 3 dolls.

5 from 8 is 3. 5 from 8 is 3.

$$\begin{array}{r} 8 \\ -5 \\ \hline 3 \end{array} \qquad \begin{array}{r} 8 \\ -5 \\ \hline 3 \end{array}$$

Subtract the numbers:

$$\begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array} \quad \begin{array}{r} 8 \\ -5 \\ \hline 3 \end{array} \quad \begin{array}{r} 8 \\ -4 \\ \hline 4 \end{array} \quad \begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array} \quad \begin{array}{r} 8 \\ -6 \\ \hline 2 \end{array} \quad \begin{array}{r} 8 \\ -2 \\ \hline 6 \end{array} \quad \begin{array}{r} 8 \\ -5 \\ \hline 3 \end{array} \quad \begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array}$$

FISHING

I see 10 fish in all.
Fred catches 3 big fish.
That leaves 7 fish.
3 from 10 leaves 7.
3 from 10 leaves 7.

$$\begin{array}{r} 10 \\ -\,3 \\ \hline 7 \end{array}$$

Look again at the 10 fish.
Take away the 7 little fish. Cover them up.
Then there are 3 fish left.
7 from 10 is 3. 7 from 10 is 3.

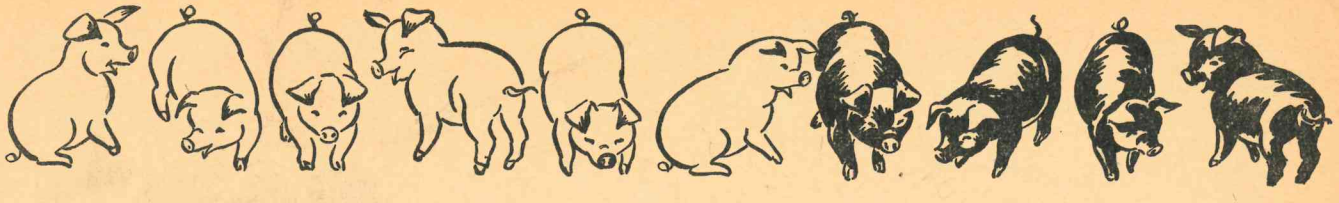
$$\begin{array}{r} 10 \\ -\,7 \\ \hline 3 \end{array}$$

Subtract the numbers:

$$\begin{array}{r} 10 \\ -\,3 \\ \hline 7 \end{array} \quad \begin{array}{r} 10 \\ -\,7 \\ \hline 3 \end{array} \quad \begin{array}{r} 10 \\ -\,2 \\ \hline 8 \end{array} \quad \begin{array}{r} 10 \\ -\,5 \\ \hline 4 \end{array} \quad \begin{array}{r} 8 \\ -\,3 \\ \hline 5 \end{array} \quad \begin{array}{r} 9 \\ -\,3 \\ \hline 6 \end{array} \quad \begin{array}{r} 7 \\ -\,4 \\ \hline 3 \end{array} \quad \begin{array}{r} 9 \\ -\,5 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 10 \\ -\,7 \\ \hline 3 \end{array} \quad \begin{array}{r} 7 \\ -\,3 \\ \hline 4 \end{array} \quad \begin{array}{r} 9 \\ -\,6 \\ \hline 3 \end{array} \quad \begin{array}{r} 10 \\ -\,3 \\ \hline 8 \end{array} \quad \begin{array}{r} 8 \\ -\,5 \\ \hline 3 \end{array} \quad \begin{array}{r} 10 \\ -\,7 \\ \hline 3 \end{array} \quad \begin{array}{r} 9 \\ -\,4 \\ \hline 5 \end{array} \quad \begin{array}{r} 10 \\ -\,3 \\ \hline 7 \end{array}$$

PIGS



Here are 6 white pigs and 4 black pigs.

6 pigs and 4 pigs are 10 pigs.

6 and 4 are 10. 4 and 6 are 10.

$$\begin{array}{r} 6 \\ 4 \\ \hline 10 \end{array} \qquad \begin{array}{r} 4 \\ 6 \\ \hline 10 \end{array}$$

If you take 6 pigs from 10 pigs, how many pigs are left? 4 pigs

6 pigs from 10 pigs leaves 4 pigs.

6 from 10 is 4. 6 from 10 is 4.

$$\begin{array}{r} 10 \\ -\ 6 \\ \hline 4 \end{array} \qquad \begin{array}{r} 10 \\ -\ 6 \\ \hline 4 \end{array}$$

If you take 4 pigs from 10 pigs, how many pigs are left? 6 pigs

4 pigs from 10 pigs leaves 6 pigs.

4 from 10 is 6. 4 from 10 is 6.

$$\begin{array}{r} 10 \\ -\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 10 \\ -\ 4 \\ \hline \end{array}$$

Subtract the numbers:

$$\begin{array}{r} 10 \\ -\ 6 \\ \hline 4 \end{array} \quad \begin{array}{r} 10 \\ -\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 10 \\ -\ 7 \\ \hline 3 \end{array} \quad \begin{array}{r} 10 \\ -\ 5 \\ \hline 5 \end{array} \quad \begin{array}{r} 10 \\ -\ 3 \\ \hline 7 \end{array} \quad \begin{array}{r} 10 \\ -\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 10 \\ -\ 8 \\ \hline 2 \end{array} \quad \begin{array}{r} 10 \\ -\ 6 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 10 \\ -\ 1 \\ \hline 9 \end{array} \quad \begin{array}{r} 10 \\ -\ 6 \\ \hline 4 \end{array} \quad \begin{array}{r} 10 \\ -\ 8 \\ \hline 2 \end{array} \quad \begin{array}{r} 10 \\ -\ 4 \\ \hline 6 \end{array} \quad \begin{array}{r} 10 \\ -\ 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 10 \\ -\ 6 \\ \hline 4 \end{array} \quad \begin{array}{r} 10 \\ -\ 9 \\ \hline 1 \end{array} \quad \begin{array}{r} 10 \\ -\ 4 \\ \hline 6 \end{array}$$

MORE ZEROS

Mary has 3 cakes. She gives 3 cakes to Betty. Then Mary has no cakes left.

If you take 3 cakes from 3 cakes there are 0 cakes left.

0 cakes means zero cakes or no cakes.

3 cakes from 3 cakes leaves 0 cakes.

3 from 3 is 0.

3 from 3 is 0.

$$\begin{array}{r} 3 \\ -\,3 \\ \hline 0 \end{array}$$

Bill had 2 rabbits. He gave 0 rabbits away.

This means that he gave no rabbits away.

So Bill has 2 rabbits left.

0 rabbits from 2 rabbits leaves 2 rabbits.

0 from 2 is 2.

0 from 2 is 2.

$$\begin{array}{r} 2 \\ -\,0 \\ \hline 2 \end{array}$$

4 from 4 is 0.

6 from 6 is 0.

0 from 4 is 4.

0 from 8 is 8.

Subtract these numbers:

$$\begin{array}{rrrrrrrr} 7 & 8 & 7 & 9 & 1 & 4 & 2 & 5 \\ -\,0 & -\,8 & -\,7 & -\,0 & -\,1 & -\,4 & -\,0 & -\,5 \\ \hline 7 & 0 & 0 & 9 & 0 & 0 & 2 & 0 \end{array}$$

$$\begin{array}{rrrrrrrr} 9 & 5 & 1 & 2 & 6 & 6 & 4 & 3 \\ -\,9 & -\,0 & -\,0 & -\,2 & -\,0 & -\,6 & -\,0 & -\,0 \\ \hline 0 & 5 & 1 & 0 & 6 & 0 & 4 & 3 \end{array}$$

HOW MANY CAN YOU DO?

★★★★★★★★ ★★ 8 and 2 are 10. 2 and 8 are 10. 2 from 10 is 8. 8 from 10 is 2.	★★★★★★★ ★★★ 7 and 3 are 10. 3 and 7 are 10. 3 from 10 is 7. 7 from 10 is 3.
◆◆◆◆◆◆ ◆◆◆ 6 and 3 are 9. 3 and 6 are 9. 3 from 9 is 6. 6 from 9 is 3.	◆◆◆◆◆ ◆◆◆◆ 5 and 4 are 9. 4 and 5 are 9. 4 from 9 is 5. 5 from 9 is 4.
★★★★★★ ★★★★ 6 and 4 are 10. 4 and 6 are 10. 4 from 10 is 6. 6 from 10 is 4.	★★★★★★★ ★★ 7 and 2 are 9. 2 and 7 are 9. 2 from 9 is 7. 7 from 9 is 2.
◆◆◆◆◆ ◆◆◆ 5 and 3 are 8. 3 and 5 are 8. 3 from 8 is 5. 5 from 8 is 3.	◆◆◆◆ ◆◆◆ 4 and 3 are 7. 3 and 4 are 7. 3 from 7 is 4. 4 from 7 is 3.

REVIEW

Add these numbers:

7 3 10	4 2 6	1 9 10	5 4 9	3 6 9	2 5 7	4 4 8	4 6 10
6 1 7	5 5 10	7 2 9	8 1 9	0 6 6	2 2 4	8 2 10	4 1 5
5 3 8	1 3 4	2 1 3	6 4 9	2 7 9	1 5 6	2 3 5	3 7 10
1 8 9	9 0 9	2 8 10	3 4 7	6 3 9	3 3 6	9 1 10	4 5 9

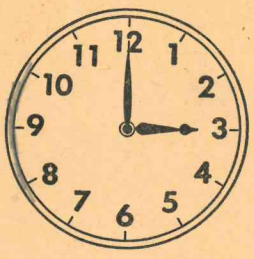
Subtract these numbers:

9 -5 4	4 -1 3	5 -3 2	10 -8 2	9 -7 2	8 -4 4	10 -1 9	6 -3 3
8 -1 7	10 -3 7	9 -3 6	7 -5 2	6 -1 5	8 -8 1	3 -2 1	10 -6 3
10 -2 8	9 -4 5	9 -8 1	2 -1 1	8 -6 2	10 -4 6	7 -3 4	9 -6 3
8 -3 5	7 -0 7	10 -5 5	6 -4 2	10 -9 1	7 -1 6	4 -2 2	10 -7 3

REVIEW

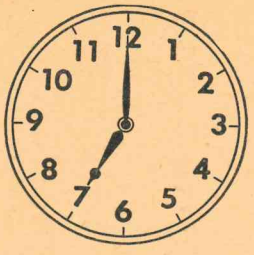
Under each clock write the time it shows:

A



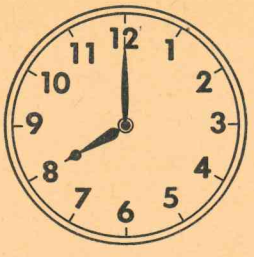
3 o'clock

B



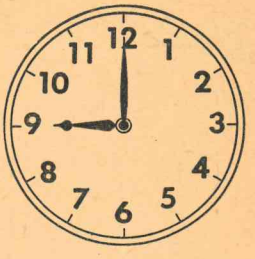
7 o'clock

C



8 o'clock

D



9 o'clock

Which clock shows the time Ann gets up? Clock B

Which clock shows the time school begins? Clock C

Which clock shows when Ann goes to play? Clock A

Which clock shows when Ann goes to bed? Clock D

Measure each line with a ruler. How long is each line?

A _____ ____ inches

B _____ ____ inches

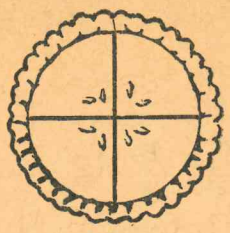
Is line *A* shorter than line *B*? Yes No

Ann weighs 52 pounds. Fred weighs 45 pounds. Does Fred weigh less than Ann? Yes No

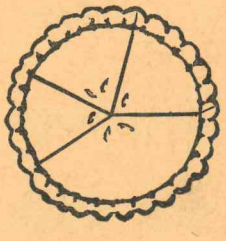
Jack has 9 apples. Does Jack have more than a dozen apples? Yes No

ONE FOURTH

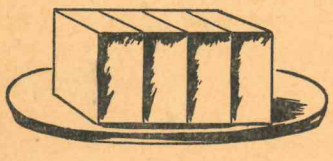
This pie is cut into 4 pieces.
The pieces are all the same size.
Each piece is one fourth of the pie.
You write one fourth like this: $\frac{1}{4}$



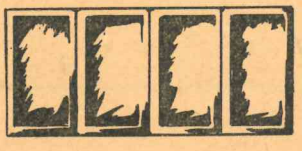
This pie is cut into _____ pieces.
Are these pieces the same size? no
These pieces are not fourths.
Fourths must be the same size.



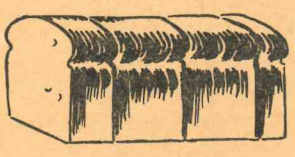
Draw a line under Yes if the pieces are fourths. Draw a line under No if the pieces are not fourths:



Yes No



Yes No



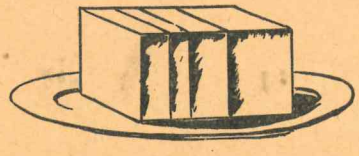
Yes No

Yes No

Yes No

Yes No

Yes No

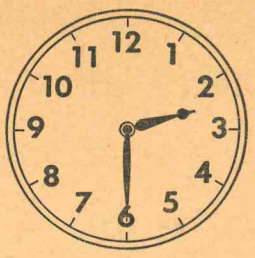


Yes No

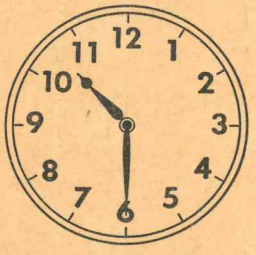
Yes No

TELLING TIME

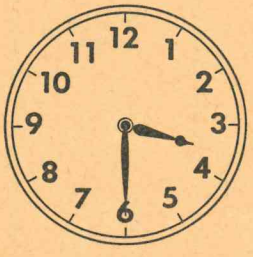
This clock shows half past 2.
The short hand is a little past 2.
The long hand is at 6.
When the long hand is at 6, the clock shows "half past."



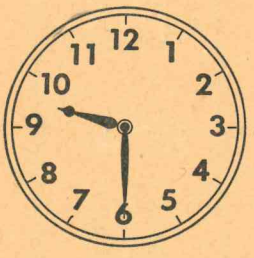
Under each clock write the time it shows:



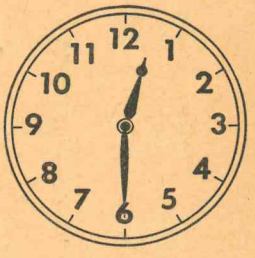
half past 10



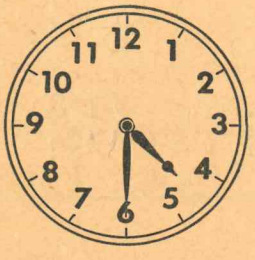
half past 3



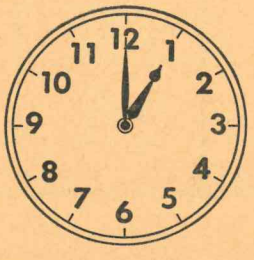
half past 9



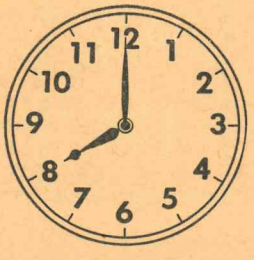
half past 12



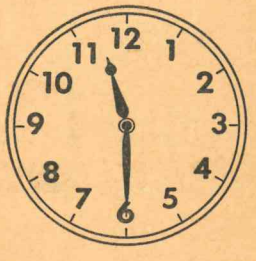
half past 4



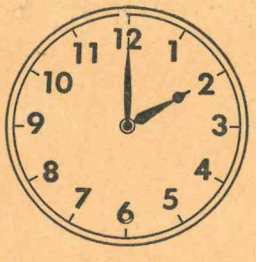
1 o'clock



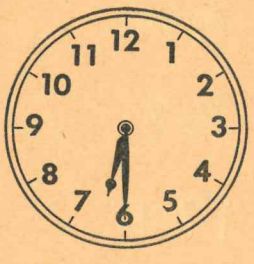
8 o'clock



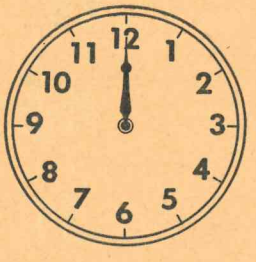
half past 11



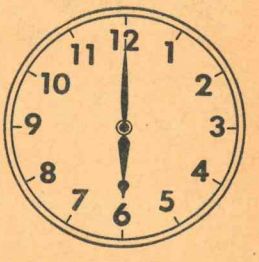
2 o'clock



half past 6



12 o'clock



6 o'clock

TO THE TEACHER. Before the children do this page, show them how to tell time to the half hour. Make clear that on the half hour the long hand points to 6 while the short hand points halfway between two numbers. The first, or smaller, of the two numbers is the one to use. A model of a clock face with movable hands will be helpful.

NUMBERS ABOVE 100

Write the numbers that are left out:

100	110	120	130	140	150	159
101	111	121	131	141	151	160
102	112	122	132	142	152	162
103	113	123	133	143	153	163
104	114	124	134	144	154	164
105	115	125	135	145	155	165
106	116	126	136	146	156	166
107	117	127	137	147	157	167
108	118	128	138	148	158	168
109	119	129	139	149	159	169

Write the numbers that come before and after:

158 159 *160*	99 100 200	172 182 192
177 178 179	166 167 168	185 195 196
182 183 184	79 180 180	169 170 171
198 199 200	161 171 181	185 186 187

TO THE TEACHER. In the work at the top of the page, direct the pupils to write down each column and complete it before starting the next column.

CAN YOU FIND THESE PAGES?

On page 47 there are 10 dolls.

On page 86 there are 8 dimes.

On page 89 there are 7 clowns.

On page 77 there are 17 flowers.

On page 95 there are 10 pigs.

On page 109 there are 16 children.

On page 99 there are 4 clocks.

On page 67 there are 9 valentines.

The largest number on page 84 is 10_.

The smallest number on page 102 is 100.

The last page of this book is page 128.

Write the numbers that are left out:

171	172	173	174	175	176
177	178	179	180	181	182

Write the numbers by 10's from 100 to 200:

100	110	120	130	140	150
160	170	180	190	200	

ADDING AND SUBTRACTING

4 + 2 = 6 means 4 and 2 are 6.

+ means and. It tells you to add. = means are.

5 – 1 = 4 means 5 take away 1 is 4, or 1 from 5 is 4.

– means take away. It tells you to subtract.

Add or subtract:

3 + 1 = 4	1 + 4 = 5	2 + 8 = 10	10 – 7 = 3
4 – 3 = 1	9 – 8 = 1	5 – 3 = 2	10 – 9 = 1
6 + 4 = 10	7 + 3 = 10	2 + 6 = 8	10 – 3 = 7
3 – 2 = 1	9 – 5 = 4	7 – 4 = 3	10 – 8 = 2
1 + 8 = 9	8 – 3 = 5	2 + 5 = 7	10 – 6 = 4
8 – 5 = 3	1 + 9 = 10	3 + 7 = 10	10 – 2 = 8

Add these numbers:

2 2 6 10	5 3 1 9	2 7 1 10	3 0 4 7	2 1 2 5	3 6 1 10	2 5 3 10	2 3 4 9
4 1 5 10	0 2 7 9	3 2 2 7	6 1 2 9	1 6 3 10	4 1 4 9	2 5 2 9	1 2 3 6

HOW MANY CAN YOU DO?

1. Bob had 4¢. Today Mother gave him 5¢. Then Bob had 9 ¢.

2. Jim bought 8 pencils. Today he lost 2 of them. Jim has 6 pencils left.

3. Mary had 10 yellow flowers. She gave 6 of them to Mother. Then Mary had 4 flowers left.

4. Joe gave 10¢ to Ann. She spent 7¢ for ice cream. Then Ann had 3 ¢ left.

5. Fred has 3 big rabbits. Betty has 1 rabbit. They both have 4 rabbits.

6. Joe made 7 airplanes. Bob made 3 airplanes. Joe made 10 airplanes more than Bob.

7. Write the answers:

4 + 3 = 7	10 − 4 = 6	7 − 2 = 5	4 + 2 = 6	3 + 5 = 8	9 − 5 = 5	2 + 8 = 10
5 − 3 = 2	8 − 8 = 0	7 + 0 = 7	6 + 4 = 10	9 − 3 = 6	3 + 3 = 6	7 − 4 = 3
3 + 7 = 10	9 − 1 = 8	1 + 6 = 7	8 − 5 = 3	10 − 9 = 1	4 + 5 = 9	6 + 2 = 8
8 − 7 =	2 + 7 = 9	4 − 2 = 2	10 − 7 = 2	6 + 3 = 9	10 − 5 = 5	4 + 4 = 8

REVIEW

Add these numbers:

5 2 7	2 1 3	3 7 10	4 5 9	2 6 8	7 0 7	1 6 7	4 4 8
3 6 9	0 0 0	1 2 3	2 3 5	3 4 7	2 0 2	4 6 10	0 3 3
9 1 10	4 2	3 0 3	3 5 8	0 6 6	2 5 7	5 0 5	5 1 6
5 4 9	2 2 4	7 2 9	6 4 10	1 3 4	2 8 10	7 3 10	2 4 6

6 and 1 are 7.

8 and 10 are 8.

4 and 0 are 4.

3 and 2 are 5.

8 and 1 are 9.

2 and 4 are 6.

5 and 7 are 10.

2 and 8 are 10.

3 and 3 are 6.

4 and 1 are 5.

1 and 7 are 8.

4 and 3 are 7.

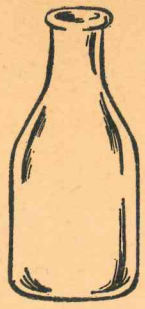
1 and 4 are 5.

5 and 2 are 7.

2 and 7 are 9.

8 and 2 are 10.

QUART AND PINT



QUART

PINT

GLASS

1 quart of milk makes 2 pints of milk.
1 pint of milk makes 2 glasses of milk.

Is 1 quart of milk more than 1 pint? Yes No
Is 1 pint of milk more than 3 glasses? Yes No
Does 1 quart of milk make 4 glasses? Yes No

Betty has 1 glass of milk in school. She has 3 glasses of milk at home. Betty has 4 glasses of milk in all. Does Betty have 1 quart of milk a day? Yes No

TO THE TEACHER. Have empty quart and pint bottles brought to school. Fill the pint bottle with water twice and pour it into the quart bottle. In this way show the children that 2 pints make 1 quart. Also show that 2 glasses of water make 1 pint and that 4 glasses make 1 quart.

BUYING THINGS

1. Jim spent 25¢ for a book and 12¢ for a ruler. How many cents did he spend in all?

   You add 25 and 12 to find how many cents Jim spent. Add the numbers like this: 5 and 2 are 7. Write 7. 2 and 1 are 3. Write 3. The answer is 37. Jim spent 37¢.

$$\begin{array}{r} 25 \\ 12 \\ \hline 37 \end{array}$$

2 Ann spent 24¢ for apples and 35¢ for oranges. How many cents did she spend in all? 59¢
Add 24 and 35 to find out.

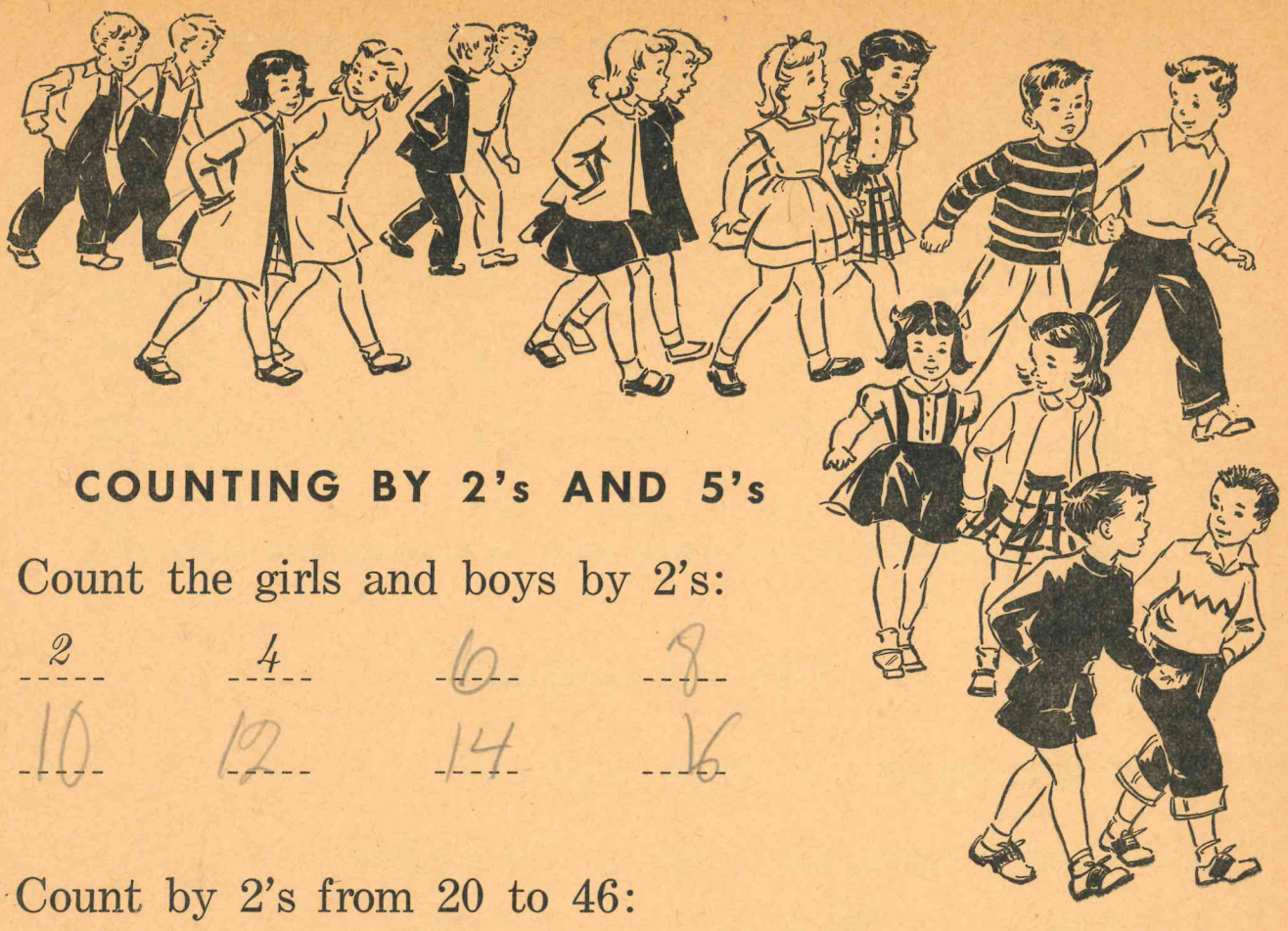
$$\begin{array}{r} 24 \\ 35 \\ \hline 59 \end{array}$$

3. Fred bought a big red balloon for 20¢. Then he bought an airplane for 45¢. How many cents did Fred spend in all? 65¢

$$\begin{array}{r} 20 \\ 45 \\ \hline 65 \end{array}$$

4. Add these numbers:

83 12 95	36 43 79	57 32 89	21 63 84	40 48 88	31 65 96	43 15 58
26 20 46	23 53 76	43 21 64	25 74 99	41 38 79	16 62 78	51 17 68
31 14 45	17 81 98	60 10 70	12 52 64	24 41 65	21 31 52	20 13 33



COUNTING BY 2's AND 5's

Count the girls and boys by 2's:

2 4 6 8
10 12 14 16

Count by 2's from 20 to 46:

20 22 24 26 28 30 32
34 36 38 40 42 44 46

How many cents do these nickels make? Count them by 5's to find out:

5 10 15 20 25 30 35

Count by 5's from 40 to 70:

40 45 50 55 60 65 70

DECEMBER						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

THE CALENDAR

Draw a line under the right answer:

1. How many days are there in December?
   26 days 30 days 31 days

2. Christmas comes on December 25. Which day of the week is that? Sunday Thursday Friday

3. Betty's birthday comes on December 15. Which day of the week is December 15?
   Monday Tuesday Saturday

4. The last day of December is December 31. It comes on
   Thursday Saturday Sunday

5. On which day does the fifth day of December come?
   Monday Wednesday Saturday

THE CALENDAR

To do this page, look at the calendar on page 110:

1. In December the last day of school for Joe is the Friday before Christmas. Joe has no more school after December 18.

2. In Joe's school there are only 18 school days in December.

3. On the day before Christmas Joe is going away with his mother. Joe is going away on December 24.

4. Joe is coming back on the Monday after Christmas. He is coming back on December 28.

5. The day after December 31 is New Year's Day. New Year's Day comes on January 1.

6. Joe goes back to school on the Monday after New Year's Day. He goes back to school on January 2.

7. At Christmas time Joe has no school for _____ weeks.

REVIEW

Subtract these numbers:

9 − 5 = 4	8 − 8 = 0	10 − 3 = 7	8 − 6 = 2	7 − 5 = 2	10 − 2 = 8	9 − 7 = 2	7 − 6 = 1
3 − 2 = 1	10 − 5 = 5	9 − 9 = 0	9 − 3 = 6	4 − 0 = 4	5 − 3 = 2	8 − 5 = 3	10 − 6 = 4
10 − 7 = 3	7 − 2 = 5	4 − 3 = 1	5 − 2 = 3	10 − 9 = 1	9 − 2 = 7	6 − 5 = 1	9 − 4 = 5
9 − 6 = 3	6 − 4 = 2	8 − 3 = 5	10 − 8 = 2	8 − 2 = 6	6 − 3 = 3	10 − 4 = 6	7 − 3 = 4
7 − 4 = 3	4 − 2 = 2	9 − 8 = 1	5 − 0 = 5	6 − 2 = 4	7 − 7 = 0	8 − 4 = 4	5 − 4 =

Write the answers:

8 − 3 = 5	3 − 3 = 0	8 − 5 = 3	5 − 3 = 2
1 + 3 = 4	2 + 5 = 7	3 + 7 = 10	2 + 6 = 8
9 − 0 = 9	1 + 8 = 9	6 + 4 = 10	7 − 3 = 4
2 + 7 = 9	7 − 4 = 3	0 + 5 = 5	8 − 7 = 1

SUBTRACTING LARGE NUMBERS

1. Betty had 35¢. She spent 14¢ for a big balloon. How many cents did she have left?

   You subtract 14 from 35 to find how many cents Betty had left. Subtract like this: 4 from 5 is 1. Write 1. 1 from 3 is 2. Write 2. The answer is 21. Betty had 21¢ left.

$$\begin{array}{r} 35 \\ 14 \\ \hline 21 \end{array}$$

2. Bob and Ann were weighed in school today. Bob weighs 47 pounds. Ann weighs 35 pounds. Bob weighs 13 pounds more than Ann.

$$\begin{array}{r} 47 \\ 35 \\ \hline 13 \end{array}$$

3. Mother made 36 cookies. She gave a dozen cookies to the boys. There are 12 cookies in a dozen. Mother had 24 cookies left.

$$\begin{array}{r} 36 \\ 12 \\ \hline 24 \end{array}$$

4. Subtract these numbers:

76 − 25 = 51	65 − 31 = 34	38 − 23 = 15	59 − 26 = 33	87 − 67 = 30	96 − 34 = 62	78 − 15 = 63
57 − 33 = 24	89 − 45 = 44	48 − 22 = 26	69 − 12 = 57	96 − 46 = 50	77 − 50 = 27	49 − 37 = 12
89 − 65 =	38 − 18 =	59 − 46 =	76 − 10 =	56 − 46 =	76 − 64 =	98 − 45 =

FOOT AND INCH

Ann is measuring her book
with a ruler.
The ruler is 12 inches long.
12 inches make 1 foot.
Ann's ruler is 1 foot long.

Ann's book is 10 inches long.
Is her book 1 foot long? _____

Measure this number book with your ruler.
This book is _____ inches long. Is it 1 foot long? _____
This book is about _____ inches wide. Is this book 1 foot wide? _____ Is it less than 1 foot wide? _____

Measure a boy with your ruler to see how tall he is.
Is the boy more than 3 feet tall? _____
Is the boy less than 4 feet tall? _____

Measure these lines with your ruler:

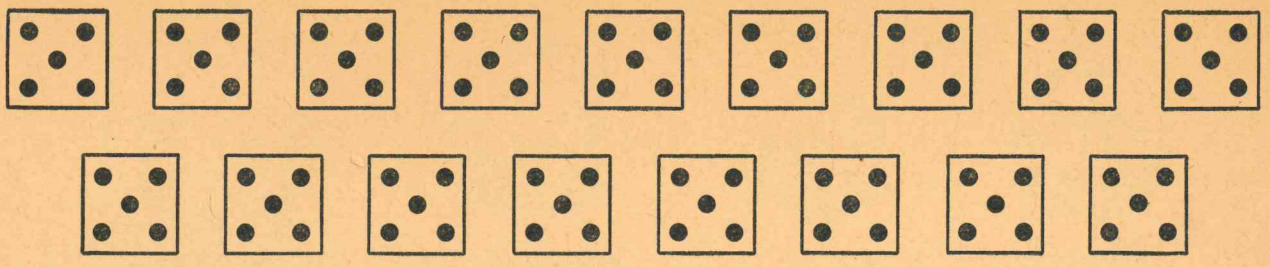
_____ _____ inches

_____ _____ inches

_____ _____ inches

TO THE TEACHER. Before doing this page have the children measure things in the room with a ruler, giving the length or width as "about 4 feet," "more than 3 feet," or "less than 5 feet," and so on. They should also try to measure the heights of other children, giving each height as "about 4 feet," and so on. In measuring a book show the children that they should measure the *long* side of the book to find how *long* it is, and the *short* side to find how *wide* it is.

COUNTING AND ADDING



Count the dots in the boxes. Count them by 5's:

5 10 15 20 25 30 35
40 45 50 55 60 65 70
75 80 85

Write the numbers that are left out:

187	188	189	190	191	192	193
194	195	196	197	198	199	200

Add these numbers:

16	72	83	24	37	41	15
41	25	11	14	61	32	21
57	97	94	38	98	73	36
33	55	13	25	60	12	32
23	43	16	42	24	57	43
56	98	29	67	84	69	75
42	41	14	41	24	33	29
50	46	73	18	12	35	50
92	87	87	59	36	68	79

COUNTING MONEY

1. Count these dimes by 10's to see how many cents they make. 10 dimes make 100¢.

1 dollar is the same as 100¢.

1 dollar is the same as 10 dimes.

2. These 2 quarters make 1 half dollar.

A half dollar is the same as 50¢.

2 quarters are the same as 50¢.

1 half dollar is the same as 2 quarters.

3. These 4 quarters make 1 dollar.

1 dollar is the same as 100¢.

4 quarters are the same as 100¢.

1 dollar is the same as 4 quarters.

1 dollar is the same as 2 half dollars.

QUARTER AND HALF DOLLAR

NICKEL
5¢

DIME
10¢

QUARTER
25¢

HALF DOLLAR
50¢

25 cents make 1 quarter.
50 cents make 1 half dollar.
100 cents make 1 dollar.

1. Count these nickels by 5's to find how many cents they make. 5 nickels make 25¢.

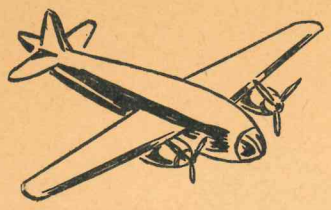
A quarter is the same as 25¢.
A quarter is the same as 5 nickels.

2. Count these dimes by 10's. 5 dimes make 50¢.

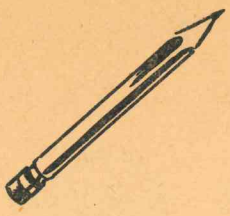
A half dollar is the same as 50¢.
A half dollar is the same as 5 dimes.

3. A dime and 3 nickels make 1 quarter.
2 dimes and 1 nickel make 1 quarter.

BUYING THINGS

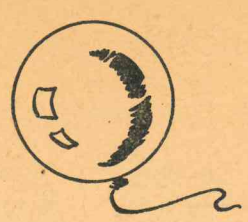


AIRPLANE
5¢



PENCIL
2¢

CANDY
1¢



BALLOON
7¢

BALL
8¢

1. Betty had a dime. She bought a balloon for 7¢. Betty's change was 3 ¢. 10¢ – 7¢ = 3 ¢.

2. Joe had a nickel. He bought a pencil for 2¢. Joe's change was 3 ¢. 5¢ – 2¢ = 3 ¢.

3. Mary had a nickel. She bought a piece of candy for 1¢. Mary's change was 4 ¢. 5¢ – 1¢ = 4 ¢.

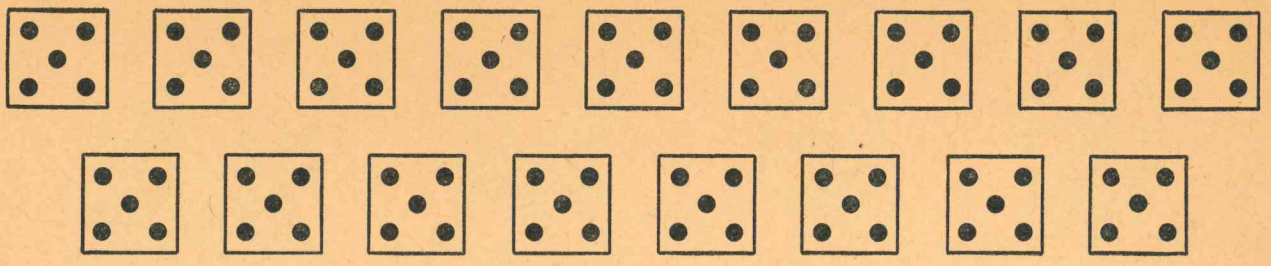
4. Jim had a dime. He bought a ball for 8¢. Jim's change was 2 ¢. 10¢ – 8¢ = 2 ¢.

5. Ann had a nickel. She bought an airplane for 5¢. Ann's change was 0 ¢. 5¢ – 5¢ = 0 ¢.

6. Jane had a dime. She bought a pencil for 2¢. Then Jane had 8 ¢ left. 10¢ – 2¢ = 8 ¢.

7. Bob had a dime. He bought a piece of candy for 1¢. Then Bob had 9 ¢ left. 10¢ – 1¢ = 9 ¢.

COUNTING AND ADDING



Count the dots in the boxes. Count them by 5's:

5 10 15 20 25 30 35

40 45 50 55 60 65 70

75 80 85

Write the numbers that are left out:

187 188 189 190 191 192 193

194 195 196 197 198 199 200

Add these numbers:

16	72	83	24	37	41	15
41	25	11	14	61	32	21
57	97	94	38	98	73	36
33	55	13	25	60	12	32
23	43	16	42	24	57	43
56	98	29	67	84	69	75
42	41	14	41	24	33	29
50	46	73	18	12	35	50
92	87	87	59	36	68	79

ADDING AND SUBTRACTING

Add the numbers:

47	21	23	67	22	24	31
51	74	25	30	46	32	43
98	95	48	97	68	56	74
65	27	53	13	56	60	54
33	62	26	12	41	29	25
98	89	79	25	97	89	79
4	1	7	3	6	2	4
3	4	1	2	0	1	2
3	2	2	5	3	7	3
10	7	10	10	9	10	9

Subtract the numbers:

84	95	75	99	76	98	68
53	25	44	40	62	82	14
31	70	31	59	14	16	54
93	79	63	68	89	24	57
11	26	53	31	78	11	34
82	53	10	37	11	13	23

Write the answers:

4 + 6 = 10	7 - 6 = 1	8 - 7 = 1	2 + 5 = 7
5 - 3 = 2	8 - 3 = 5	3 + 7 = 10	7 - 3 = 4
2 + 4 = 6	7 + 3 = 10	5 - 5 = 0	4 + 0 = 4
10 - 3 = 7	6 - 5 = 1	6 + 4 = 10	2 + 6 = 8

MORE OR LESS

1. Joe has 6 big apples. Bob has 4 big apples. Joe has 2 more big apples than Bob.

2. Mary Ann ate 2 pieces of candy. Jim ate 4 pieces of candy. Mary Ann ate 2 less pieces than Jim.

3. Jane has 5 white ducks. Betty has 3 white ducks. Jane has 2 more white ducks than Betty.

4. Fred spent 1 cent for candy. Jane spent 4 cents. Fred spent 3 cents less than Jane.

5. Mary read 2 story books. Joe read 5 story books. Joe read 3 books more than Mary.

6. Jim made 8 valentines. Betty made 6 valentines. Betty made 2 valentines less than Jim.

7. Subtract these numbers:

88	74	89	59	87	39	72
30	54	71	15	76	29	32
58	20	18	44	11	10	40
96	64	54	86	88	79	59
82	32	41	10	68	43	27
14	32	13	76	20	36	32
63	96	87	97	65	26	85
22	71	35	37	53	14	40
41	25	52	60	12	12	45

REVIEW

Put the right word on the line:

The boy with the rabbit is *second*.

The girl with the duck is *fourth*.

The boy with the pig is *fifth*.

The girl with the cat is *third*.

The boy with the dog is *first*.

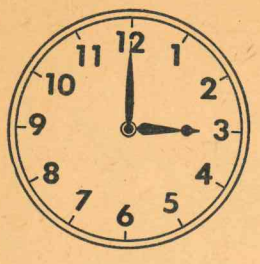
The last boy has a *pig*.

Draw a line under Yes or No:

Today is Tuesday.	Yes	No
12 inches make 1 foot.	Yes	No
10 dimes make a half dollar.	Yes	No
12 things make a dozen.	Yes	No
3 glasses make a quart.	Yes	No
7 days make a week.	Yes	No
I weigh less than 10 pounds.	Yes	No
Jane cut a cake into 4 pieces all the same size. Each piece is one fourth of the cake.	Yes	No

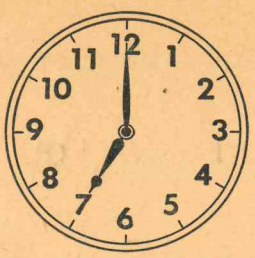
REVIEW

Draw a line under the right time. See the first one:



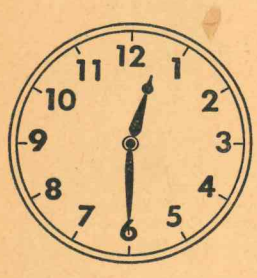
3 o'clock

half past 8



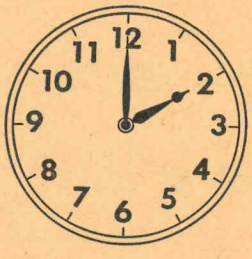
7 o'clock

half past 11



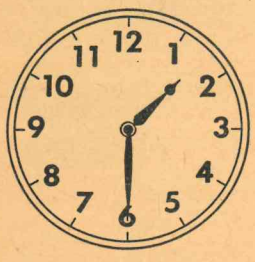
6 o'clock

half past 12



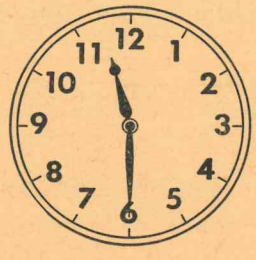
2 o'clock

12 o'clock



2 o'clock

half past 1



half past 12

half past 11

Add these numbers:

1	2	5	2	3	4	3	3
4	0	1	2	2	2	3	3
5	7	3	3	4	2	1	4
10	9	9	7	9	8	7	10

1	3	4	2	2	5	0	3
3	1	2	4	3	3	8	4
1	6	4	3	3	2	1	1
5	10	10	9	8	10	9	8

HOW MANY CAN YOU ANSWER?

How many years old are you? 10 years

How many inches tall are you? 54 inches

How many pounds do you weigh? ____ pounds

In which month is your birthday? August

When do you get up? 7:00

When do you go to school? 8:00

When does school begin? 8:30

When do you leave school? 3:20

When do you go to bed? 8:30

How many pets have you? 2 pets

How many pennies make a dime? 10 pennies

How many nickels make a dime? 2 nickels

How many dimes make a half dollar? 5 dimes

How many days make a week? 7 days

How many days has this month? 31 days

How many things make a dozen? 12 things

How many inches make a foot? 12 inches

How many pints make a quart? 2 pints

CAN YOU ADD THESE?

Add these numbers:

1 5 6	3 2 5	2 1 3	7 2 9	2 5 7	1 9 10	0 7 7	1 4 5
0 3 3	4 2 6	8 1 9	2 2 4	6 0 6	3 6 9	1 7 8	4 3 7
4 4 8	6 1 7	0 9 9	3 7 10	1 3 4	2 6 8	8 2 10	0 1 1
1 8 9	1 1 2	3 5 8	5 1 6	2 4 6	5 4 9	4 0 4	6 2 8
0 8 8	9 1 10	3 4 7	2 0 2	6 4 10	1 6 7	6 3 9	3 1 4
2 3 5	5 5 10	4 1 5	5 2 7	0 0 0	7 3 10	2 8 10	4 6 10
7 1 8	0 5 5	2 7 9	1 2 3	3 3 6	4 5 9	9 0 9	5 3 8

To the Teacher. All the 45 addition facts with sums to 10 or below are given on this page, together with 11 of the zero facts. Instead of having the pupil write the answers to the facts upon this page, the teacher may prefer to have the answers written on folded paper as explained on the inside of the back cover of this book. By using folded paper this page may be used for test purposes as often as the teacher wishes.

CAN YOU SUBTRACT THESE?

Subtract these numbers:

7 − 2 = 5	9 − 6 = 3	5 − 1 = 4	10 − 5 = 5	9 − 8 = 1	8 − 3 = 5	6 − 4 = 2	10 − 8 = 2
9 − 9 = 0	10 − 1 = 9	7 − 6 = 1	4 − 3 = 1	5 − 2 = 3	8 − 6 = 2	4 − 0 = 4	9 − 2 = 7
2 − 0 = 2	6 − 3 = 3	9 − 3 = 6	6 − 1 = 5	10 − 7 = 3	7 − 7 = 0	8 − 1 = 7	3 − 2 = 1
9 − 1 = 8	8 − 2 = 6	10 − 4 = 6	3 − 3 = 0	7 − 3 = 4	2 − 1 = 1	5 − 3 = 2	8 − 0 = 8
6 − 2 = 4	4 − 4 = 0	5 − 4 = 1	9 − 5 = 4	4 − 1 = 3	8 − 4 = 4	10 − 9 = 1	1 − 1 = 0
10 − 3 = 7	7 − 1 = 6	9 − 7 = 2	8 − 5 = 3	6 − 6 = 0	10 − 6 = 4	3 − 1 = 2	7 − 5 = 2
8 − 7 = 1	5 − 0 = 5	7 − 4 = 3	10 − 2 = 8	6 − 5 = 1	4 − 2 = 2	9 − 4 = 5	9 − 0 = 9

To the Teacher. All the 45 subtraction facts with minuends to 10 or below are given on this page, together with 11 of the zero subtraction facts. See the footnote on page 124 with reference to the use of folded paper.

TO THE TEACHER

Suggestions relating to the teaching of specific pages of this book are given below.

Page 1. The purpose of this page is to compare two objects as to size, using the terms *long, short, large, small.* Before assigning this page, give oral exercises in which books, pencils, boxes, and other objects are compared as to size. Also have the children draw on the blackboard a long line and a short line, a large cat and a small cat, etc.

Pages 2–3. It is important that the children form correct habits of writing the figures 1 to 9. Children often write figures backward or in the wrong direction. In the models on pages 2 and 3, the star at the top of each figure indicates the point where the child begins. The dotted part of each figure should be made first and the black part second. Particular attention should be given to the writing of the figures 4 and 5. In each of these figures it is necessary to lift the pencil from the paper after finishing the dotted part and before beginning the black part.

Page 6. Each child should have the sequence of the number names so thoroughly memorized that he is able to tell quickly that 8 comes after 7 without being obliged to start back at 1 and count up to 8. On this and subsequent pages questions are often asked which are to be answered by Yes or No. On all such pages instruct the pupils to draw a line under Yes if the answer is Yes, or under No if the answer is No.

Pages 7–15. These pages are devoted to the development of the easiest addition facts in which 1 is added to a given number. The doubles, 2+2, 3+3, 4+4, and 5+5, are also included in this group. Work of this kind should first be developed orally in the classroom, making use of actual objects. It is by counting objects that the children discover that 2 balls and 1 ball are 3 balls, which is the first step in learning that 2 and 1 are 3. After oral exercises with real objects, the work on page 7, which makes use of pictures of objects, may be taken up. First have some child read this page, giving orally the numbers that belong in the spaces. Then have all the children read the page again silently, writing the answers in the spaces and also at the right of the page under the vertical form of the fact.

Attention is called to the fact that on page 7 the child not only learns that 2 balls and 1 ball are 3 balls but also that 1 ball and 2 balls are 3 balls. In other words, from the beginning, the child becomes familiar with the important fact that 2 and 1 has the same answer as 1 and 2. Teachers find it convenient to speak of the fact, 1 and 2, as the *reverse* of 2 and 1 since the numbers in these two facts are reversed in order.

Pages 8 to 10 are planned like page 7, each new fact and its reverse being given together. The fact that two numbers have the same sum, regardless of the order in which the numbers appear, is a very important principle in arithmetic, which is called the *principle of reverses.* This principle is an important aid in the learning of the addition facts because it enables the child to learn two addition facts at the same time. The principle is also helpful in remedial work when the child does not remember the sum of two numbers. For example, if a child does not remember that 1 and 6 are 7, ask the question, "How many are 6 and 1?" It is probable that the child will easily recall that 6 and 1 are 7 and thus be able to say that 1 and 6 are 7.

It should be emphasized in connection with these pages that the aim at this time is not to develop mastery or memorization of these facts. The main purpose now is to show how the sum is obtained by using objects and to put *meaning* and *understanding* into statements like 6 and 1 are 7. Later on, after the child understands the nature of this work, he will be able to remember the answers without the aid of objects or pictures.

In developing each addition fact it will be noted that each fact is written in three forms. For example, the child learns that 2 balls and 1 ball are 3 balls which he associates with the shorter form 2 and 1 are 3. At the right of these statements the fact is also given in the vertical form. It is important from the beginning to associate these three forms of writing a fact. When the child does the written work, he should write the answers not only on the dotted lines but also under the vertical form of each fact as shown at the top of page 7.

Pages 16–18. The purpose of these pages is to acquaint the child with the number words *one, two,* and so on, up to *ten.*

Page 19. The work on this page should be preceded by oral exercises in which the children are shown the actual coins and become able to identify them. Also make sure that each child is able to identify the *picture* of each coin. Oral exercises using toy money are helpful in this work.

Pages 20–27. These pages develop the simple subtraction facts in which 1 is subtracted from a given number. Included in this group are the facts, $4-2$, $6-3$, $8-4$, and $10-5$, which correspond to the doubles, $2+2$, $3+3$, $4+4$, and $5+5$. All this work stresses the *take-away notion* of subtraction. Before taking up these pages give oral exercises, using actual objects, to show the meaning of subtraction. For example, start with 3 pencils, then take away 1 pencil, and show that 2 pencils are left. On these pages the

children may be told to cross out, or cover up, the objects that are taken away, which helps them to see how many objects are left. On page 27, the last half of the page is devoted to a review made up of both addition and subtraction facts for which the children write the answers. In exercises like this it is necessary to use both the plus and the minus signs in order to indicate whether the child is to add or subtract. It is not necessary to use the plus sign, however, on pages like 7 to 11 where all the facts are addition facts.

At this point it is natural to ask why the plus and minus signs are not yet used to write the addition and subtraction facts in the horizontal forms, such as $2+3=5$ and $4-1=3$. In this book such work is postponed until page 104. The reason for this is to reduce the variety of forms with which the child has to become familiar and to center attention upon the vertical forms like those shown at the right since these vertical forms are the ones that the child will use most often as his study of arithmetic progresses.

$$\begin{array}{r} 3 \\ 2 \\ \hline 5 \end{array} \qquad \begin{array}{r} 4 \\ -1 \\ \hline 3 \end{array}$$

Page 28. On pages like this it is important for the child to know exactly what is to be done. To get the answers the child may use the dots or stars above each pair of facts if he needs to. In writing the answers for the subtraction facts, he may cross out, or cover up, the dots that are taken away.

Page 29. Number stories like these should be read orally in class before doing the written work. The situation represented by each problem may also be dramatized with effective results. The answer to each problem should be written not only on the dotted line but also under the fact in its vertical form at the right of the page.

Pages 30–32. These pages deal with the numbers from 11 to 20. Before taking up page 30 the child should be thoroughly familiar with the oral counting of objects to 20. It is important that children understand the meaning of numbers to 20. For example, 15 means 10 and 5, 17 means 10 and 7, etc. The meaning of these numbers may also be shown with the aid of a bead frame or by using a dime and pennies. For example, 17 cents is 1 dime and 7 cents. On page 32 the work should be supplemented by using toy money to make other combinations of coins, limiting the totals to 20¢.

Page 33. This page should be preceded by instruction in using a ruler to measure things. If possible each child should be supplied with a ruler. At this point measurements are confined to lengths of 12 inches or less and are given in whole inches. Measurements to the half inch and quarter inch are postponed until the next grade. If something is more than 6 inches long but not as long as 7 inches, the child may report the length as *more than 6 inches*, or *a little longer than 6 inches*. The foot is not introduced until page 114.

Page 34. This page is concerned with the comparative terms *tall, taller, long, longer, short, shorter, large, larger*. Classroom exercises using these terms should precede the work on this page.

Pages 35–40. These pages cover the addition facts in which 2 is added to each number. It should be noted that each fact and its reverse are presented at the same time. See the suggestions for teaching pages 7–15.

Page 43. See the suggestions for page 29.

Pages 44–47. These pages develop the subtraction facts in which 2 is subtracted from each number. The suggestions given for teaching pages 20–27 also apply to these pages. In connection with page 44 the children may play store using toy pennies. Try to limit the purchases to articles costing 1¢ or 2¢ in order to keep within the subtraction facts already studied. If harder facts come up, the children can find the answers by using pennies, showing how many are spent and how many are left.

Pages 49–53. These pages treat of the meaning of numbers up to 100 and include counting by 10's. This work can most profitably be carried on by using a bead frame having 10 rows of beads with 10 beads on each row. Bundles of sticks with 10 sticks in each bundle can also be used. Rows of stars, with 10 stars in each row, may be drawn on the board; then 3 rows represent 30, etc.

Page 54. In finding a page number the child should use his knowledge of counting instead of aimlessly turning the pages forward and backward until the desired page number is found. The child should first open his book at any point and observe the page number at that point. If he opens the book at page 12 and is looking for page 21, his knowledge of counting should tell him that page 21 comes after page 12.

Page 55. The concept *one half* should first be presented through exercises in which objects like an apple or a stick of candy are divided into two equal parts. In developing the meaning of one half, it must be made clear that the two parts are of the *same size*. If an apple has actually been divided into halves, there is no such thing as a big half and a little half. Paper circles and squares should actually be cut into halves by the children. A picture of a pie may be drawn on the board and a child asked to draw a line showing where to cut the pie to divide it into halves. Exercises of this type should precede the work on page 55.

TO THE TEACHER

Pages 57–62. On pages 7–11 and 35–40 the children have learned that addition facts go in pairs, one fact being the reverse of the other. For example, $3 + 1$ and $1 + 3$ make a pair of addition facts. In the same way, the subtraction facts go in pairs. For example, $4 - 1$ and $4 - 3$ are a pair of subtraction facts. Of these two facts, $4 - 1$ is easier than $4 - 3$. On page 20, the easier fact, $4 - 1$, was first developed but $4 - 3$ was not developed at that time. On pages 57–61, easy subtraction facts like $4 - 1$ are redeveloped and at the same time the companion facts like $4 - 3$, are developed. In this way pages 57–61 review a set of subtraction facts already studied and also present the companion facts.

Page 63. See the suggestions for page 29.

Page 64. The ordinal numbers, first, second, third, fourth, and fifth, should first be developed through oral exercises. Have 5 children stand in a row and ask the other children to give the name of the second child, the fourth child, etc. The ordinals may easily be extended to tenth. If it is pointed out that ordinals like *fourth*, *sixth*, and *seventh* are formed by adding *th* to the words *four*, *six*, and *seven*, the children can easily give the ordinals up to *tenth*. Practice in using the ordinals can also be had in connection with the calendar.

Page 65. The terms *tallest*, *shortest*, *highest*, *lowest*, *largest*, and *smallest* are here developed. This page should be preceded by oral exercises.

Page 66. This is the additive form of subtraction and is good practice in preparation for the subtraction facts. More practice can be had in oral exercises such as "Here are 5 pencils. How many more do I need to make 7 pencils?" When questions of this kind are asked, try to keep within the facts already studied. If the children themselves introduce new facts, the answers can be worked out by means of objects.

Pages 67–71. These pages redevelop the subtraction facts in which 2 is subtracted from each number and at the same time present the companion facts. For example, on page 67, $9 - 2$ is redeveloped and its companion, $9 - 7$, is also developed.

Page 72. The work on page 72 may first be dramatized by playing store and making change.

Page 73. Oral exercises using the school calendar can profitably precede this work. If preferred, each child may use this page to make his birthday month instead of the current month. Page 73 affords excellent practice in writing two-figure numbers. Ordinal numbers may also be brought into use by asking such questions as, "On what day of the week does the fourth of February come?"

Page 74. This page introduces the use of subtraction as a means of comparing two numbers. In this comparison the child finds *how many more* or *how many less* one number is than another. Before doing this page it will be profitable to dramatize situations similar to those given here. Jack may be given 6 books; Ann may be given 4 books. Then ask, "How many more books has Jack than Ann?" This comparison can also be made using the word *less* instead of *more*. The important thing is that subtraction enables one to find how many more or how many less.

Pages 76–82. These pages develop the following new addition facts and their reverses: $3 + 4$, $4 + 5$, $5 + 3$, $6 + 3$, $6 + 4$, $7 + 3$. On these pages easy work is given in the use of number relationships as a means of helping the child to get the answers to certain new facts. For example, on page 76, the fact $3 + 3$, which the child already knows, is used as a helper to get the answer to $3 + 4$. Since $3 + 3 = 6$, it is easy to see that $3 + 4$ must be 7. Similarly, on page 77, $4 + 4$ is used as a helper to get the answer to $4 + 5$. Relationships of this kind are also used on pages 78 and 80. In this grade these relationships are used only *informally* in connection with the objective development of the new facts on pages 76–80. At this stage, the development of new facts through the use of objects is the most important consideration.

Page 83. The zero facts in addition are presented here.

Page 84. The number words *eleven* and *twelve* represent the new work on this page.

Page 87. This is the first work on adding three numbers.

Page 88. These exercises are preparatory to the development of the new subtraction facts on pages 89–95.

Pages 89–95. On page 89 the subtraction facts $7 - 3$ and $7 - 4$ are related to the corresponding addition facts, $4 + 3$ and $3 + 4$; thus making a family of four related facts. Similar families of four facts each are given on pages 90, 91, 93, 95.

Page 96. The zero facts in subtraction are given on this page.

Page 100. See the suggestions for page 55.

Page 108. Since all the addition facts with sums up to 10 have now been taught, these facts may be used in the addition of two-figure numbers. Since carrying is not taught in this grade, only those facts with sums up to 9 can be used in the addition of two-figure numbers.

Page 113. The subtraction facts already studied may now be used in the subtraction of two-

(Continued on opposite page)

TO THE TEACHER

figure numbers. Since borrowing is not taught in this grade, the subtraction facts must be limited to those with minuends up to 9.

Page 114. Measurement is now extended to include the foot. Show the children how to measure lines longer than a foot by marking off the length of a foot and starting at that point to measure again. For practice, measure the heights of children, the lengths and widths of tables, etc.

Pages 116–117. The pupils should be shown actual coins and helped to understand their values. For example, it should be pointed out that a dime will buy as much as 2 nickels, a quarter will buy as much as 5 nickels, etc. The use of toy money is helpful in this work. In connection with page 117, show the children a dollar bill or a silver dollar if the latter is used in your locality.

Page 118. This work may be dramatized by playing store. In such work the coins used should be limited to the dime, nickel, and cent.

Pages 119–123. These pages review topics already studied.

Pages 124–125. These pages review all the addition and subtraction facts taught in this grade, these facts being limited to those with sums and minuends of 10 or less. In order to use these pages several times each as tests or reviews, the answers for each page may be written on folded paper, as described below, instead of on the pages themselves.

Use of Folded Paper. The method of using folded paper is as follows: On page 124, the pupil places the edge of a sheet of paper under the first row of exercises and writes only the answers along the edge of the paper. When the first row is finished, the answers are folded under; the answers to the second row of exercises are then written along the folded edge, and so on. It will save time to fold and crease the paper in advance, each fold being about 1 inch wide.

NUMBER NAMES

10 ten	11 eleven	12 twelve	13 thirteen	14 fourteen
15 fifteen	16 sixteen	17 seventeen	18 eighteen	19 nineteen
20 twenty	30 thirty	40 forty	50 fifty	60 sixty
70 seventy	80 eighty	90 ninety	100 one hundred	

INDEX